

# Michigan Register

Issue No. 10 – 2002 (Published June 15, 2002)



# GRAPHIC IMAGES IN THE MICHIGAN REGISTER

## COVER DRAWING

### *Michigan State Capitol:*

This image, with flags flying to indicate that both chambers of the legislature are in session, may have originated as an etching based on a drawing or a photograph. The artist is unknown. The drawing predates the placement of the statue of Austin T. Blair on the capitol grounds in 1898.

(Michigan State Archives)

## PAGE GRAPHICS

### *Capitol Dome:*

The architectural rendering of the Michigan State Capitol's dome is the work of Elijah E. Myers, the building's renowned architect. Myers inked the rendering on linen in late 1871 or early 1872. Myers' fine draftsmanship, the hallmark of his work, is clearly evident.

Because of their size, few architectural renderings of the 19<sup>th</sup> century have survived. Michigan is fortunate that many of Myers' designs for the Capitol were found in the building's attic in the 1950's. As part of the state's 1987 sesquicentennial celebration, they were conserved and deposited in the Michigan State Archives.

(Michigan State Archives)

### *East Elevation of the Michigan State Capitol:*

When Myers' drawings were discovered in the 1950's, this view of the Capitol – the one most familiar to Michigan citizens – was missing. During the building's recent restoration (1989-1992), this drawing was commissioned to recreate the architect's original rendering of the east (front) elevation.

(Michigan Capitol Committee)

# Michigan Register

Published pursuant to § 24.208 of  
The Michigan Compiled Laws



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(This issue, published June 15, 2002, contains  
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## PREFACE

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### PUBLICATION AND CONTENTS OF THE MICHIGAN REGISTER

The Office of Regulatory Reform publishes the *Michigan Register*.

While several statutory provisions address the publication and contents of the *Michigan Register*, two are of particular importance.

MCL 24.208 states:

Sec. 8 (1) The office of regulatory reform shall publish the Michigan register at least once each month. The Michigan register shall contain all of the following:

- (a) Executive orders and executive reorganization orders.
  - (b) On a cumulative basis, the numbers and subject matter of the enrolled senate and house bills signed into law by the governor during the calendar year and the corresponding public act numbers.
  - (c) On a cumulative basis, the numbers and subject matter of the enrolled senate and house bills vetoed by the governor during the calendar year.
  - (d) Proposed administrative rules.
  - (e) Notices of public hearings on proposed administrative rules.
  - (f) Administrative rules filed with the secretary of state.
  - (g) Emergency rules filed with the secretary of state.
  - (h) Notice of proposed and adopted agency guidelines.
  - (i) Other official information considered necessary or appropriate by the office of regulatory reform.
  - (j) Attorney general opinions.
  - (k) All of the items listed in section 7(1) after final approval by the certificate of need commission or the statewide health coordinating council under section 22215 or 22217 of the public health code, 1978 PA 368, MCL 333.22215 and 333.22217.
- (2) The office of regulatory reform shall publish a cumulative index for the Michigan register.
  - (3) The Michigan register shall be available for public subscription at a fee reasonably calculated to cover publication and distribution costs.
  - (4) If publication of an agency's proposed rule or guideline or an item described in subsection (1)(k) would be unreasonably expensive or lengthy, the office of regulatory reform may publish a brief synopsis of the proposed rule or guideline or item described in subsection (1)(k), including information on how to obtain a complete copy of the proposed rule or guideline or item described in subsection (1)(k) from the agency at no cost.
  - (5) An agency shall transmit a copy of the proposed rules and notice of public hearing to the office of regulatory reform for publication in the Michigan register.

MCL 4.1203 states:

Sec. 203. (1) The Michigan register fund is created in the state treasury and shall be administered by the office of regulatory reform. The fund shall be expended only as provided in this section.

- (2) The money received from the sale of the Michigan register, along with those amounts paid by state agencies pursuant to section 57 of the administrative procedures act of 1969, 1969 PA 306, MCL 24.257, shall be deposited with the state treasurer and credited to the Michigan register fund.
- (3) The Michigan register fund shall be used to pay the costs preparing, printing, and distributing the Michigan register.
- (4) The department of management and budget shall sell copies of Michigan register at a price determined by the office of regulatory reform not to exceed cost of preparation, printing, and distribution.
- (5) Notwithstanding section 204, beginning January 1, 2001, the office of regulatory reform shall make the text of the Michigan register available to the public on the internet.
- (6) The information described in subsection (5) that is maintained by the office of regulatory reform shall be made available in the shortest feasible time after the information is available. The information described in subsection (5) that is not maintained by the office of regulatory reform shall be made available in the shortest feasible time after it is made available to the office of regulatory reform.
- (7) Subsection (5) does not alter or relinquish any copyright or other proprietary interest or entitlement of this state relating to any of the information made available under subsection (5).
- (8) The office of regulatory reform shall not charge a fee for providing the Michigan register on the internet as provided in subsection (5).
- (9) As used in this section, "Michigan register" means that term as defined in section 5 of the administrative procedures act of 1969, 1969 PA 306, MCL 24.205.

#### **CITATION TO THE MICHIGAN REGISTER**

The *Michigan Register* is cited by year and issue number. For example, 2001 MR 1 refers to the year of issue (2001) and the issue number (1).

#### **CLOSING DATES AND PUBLICATION SCHEDULE**

The deadlines for submitting documents to the Office of Regulatory Reform for publication in the *Michigan Register* are the first and fifteenth days of each calendar month, unless the submission day falls on a Saturday, Sunday, or legal holiday, in which event the deadline is extended to include the next day which is not a Saturday, Sunday, or legal holiday. Documents filed or received after 5:00 p.m. on the closing date of a filing period will appear in the succeeding issue of the *Michigan Register*.

The Office of Regulatory Reform is not responsible for the editing and proofreading of documents submitted for publication.

Documents submitted for publication should be delivered or mailed in an electronic format to the following address: MICHIGAN REGISTER, Office of Regulatory Reform, Executive Office, George W. Romney Building, 111 S. Capitol Avenue, Lansing, MI 48933

### **RELATIONSHIP TO THE MICHIGAN ADMINISTRATIVE CODE**

The *Michigan Administrative Code* (1979 edition), which contains all permanent administrative rules in effect as of December 1979, was, during the period 1980-83, updated each calendar quarter with the publication of a paperback supplement. An annual supplement contained those permanent rules, which had appeared in the 4 quarterly supplements covering that year.

Quarterly supplements to the Code were discontinued in January 1984, and replaced by the monthly publication of permanent rules and emergency rules in the *Michigan Register*. Annual supplements have included the full text of those permanent rules that appear in the twelve monthly issues of the *Register* during a given calendar year. Emergency rules published in an issue of the *Register* are noted in the annual supplement to the Code.

### **SUBSCRIPTIONS AND DISTRIBUTION**

The *Michigan Register*, a publication of the State of Michigan, is available for public subscription at a cost of \$110.00 per year. Submit subscription requests to: DMB, Office of Administrative Services, P.O. Box 30026, 320 South Walnut Street, Lansing, MI 48909. Checks Payable: State of Michigan. Any questions should be directed to the Office of Regulatory Reform (517) 373-0526.

### **INTERNET ACCESS**

The *Michigan Register* can be viewed free of charge on the Internet web site of the Office of Regulatory Reform: [www.state.mi.us/orr](http://www.state.mi.us/orr)

Issue 2000-3 and all subsequent editions of the *Michigan Register* can be viewed on the Office of Regulatory Reform Internet web site. The electronic version of the *Register* can be navigated using the blue highlighted links found in the Contents section. Clicking on a highlighted title will take the reader to related text, clicking on a highlighted header above the text will return the reader to the Contents section.

Brian D. Devlin, Director  
Office of Regulatory Reform



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Issue No.	Closing Date for Filing or Submission Of Documents (5 p.m.)	Publication Date
2002		
1	January 15, 2002	February 1, 2002
2	February 1, 2002	February 15, 2002
3	February 15, 2002	March 1, 2002
4	March 1, 2002	March 15, 2002
5	March 15, 2002	April 1, 2002
6	April 1, 2002	April 15, 2002
7	April 15, 2002	May 1, 2002
8	May 1, 2002	May 15, 2002
9	May 15, 2002	June 1, 2002
10	June 1, 2002	June 15, 2002
11	June 15, 2002	July 1, 2002
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19	October 15, 2002	November 1, 2002
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22	December 1, 2002	December 15, 2002
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**ADMINISTRATIVE RULES**  
**FILED WITH THE SECRETARY OF STATE**

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*MCL 24.208 states in part:*

*“Sec. 8. (1) The office of regulatory reform shall publish the Michigan register at least once each month. The Michigan register shall contain all of the following:*

\* \* \*

*(f) Administrative rules filed with the secretary of state.”*

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**ADMINISTRATIVE RULES**

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**ORR # 2001-004**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**DRINKING WATER AND RADIOLOGICAL PROTECTION DIVISION**

**SUPPLYING WATER TO THE PUBLIC**

Filed with the Secretary of State on May 22, 2002

This rule takes effect 7 days after filing with the Secretary of State

(By authority conferred on the department of environmental quality by sections 5, 7, 14, and 19 of 1976 PA 399, MCL 325.1005, 325.1007, 325.1014, and 325.1019, and Executive Reorganization Order No. 1996-1, MCL 330.3101)

R 325.10410 of the Michigan Administrative Code is amended as follows:

**PART 4. PUBLIC NOTIFICATION AND PUBLIC EDUCATION**

**R 325.10410 Public education regarding lead.**

Rule 410. (1) If a community water system or a nontransient noncommunity water system exceeds the lead action level based on tap water samples that are collected under R 325.10710a, then the supplier shall deliver the public education materials specified in 40 C.F.R. §§141.85(a) and (b), (January 26, 2000), which are adopted by reference. The adopted material is available from the Superintendent of Documents at the address in R 325.10116(b) for a cost of \$47.00 at the time of adoption of these rules. The adopted material is available for inspection, or copies are available at no cost from the offices of the department at the address in R 325.10116(a).

(2) In a community where more than 10% of the population speaks a language other than English, public education materials shall be communicated in the appropriate language or languages.

(3) The supplier of a community water system that exceeds the lead action level on the basis of tap water samples collected under R 325.10710a, and that is not already repeating public education tasks pursuant to subrules (4), (8), and (9) of this rule, shall, within 60 days, do all of the following:

(a) Insert notices in each customer's water utility bill containing the information specified in 40 C.F.R. §141.85(a)(1), together with the following alert on the water bill itself in large print: "Some homes in this community have elevated lead levels in their drinking water. Lead can pose a significant risk to your health. Please read the enclosed notice for further information." The supplier of a community water system having a billing cycle that does not include a billing within 60 days of exceeding the action level, or that cannot insert information in the water utility bill without making major changes to its billing system, may use a separate mailing to deliver the information in 40 C.F.R. §141.85(a)(1), as adopted by reference in subrule (1) of this rule, as long as the information is delivered to each customer within 60 days of exceeding the action level. The supplier shall also include the "alert" language specified in this subdivision.

- (b) Submit the information specified in 40 C.F.R. §141.85(a)(1), as adopted by reference in subrule (1) of this rule, to the editorial departments of the major daily and weekly newspapers circulated throughout the community.
- (c) Deliver pamphlets or brochures, or both, that contain the public education materials specified in 40 C.F.R. §§141.85(a)(1)(ii) and (iv), as adopted by reference in subrule (1) of this rule, to facilities and organizations, including all of the following:
- (i) Public schools or local school boards.
  - (ii) City or county health department.
  - (iii) Women, infants, and children (WIC), or head start programs.
  - (iv) Public and private hospitals or clinics.
  - (v) Pediatricians.
  - (vi) Family planning clinics.
  - (vii) Local welfare agencies.
- (d) Submit the public service announcement specified in 40 C.F.R. §141.85(b), as adopted by reference in subrule (1) of this rule, to not fewer than 5 of the radio and television stations with the largest audiences that broadcast to the community that is served by the system. For small water systems, the public service announcement may be hand delivered to each customer instead of submitting the announcement to radio and television stations.
- (4) The supplier of a community water system shall repeat the tasks specified in subrule (3)(a), (b), and (c) of this rule every 12 months and the tasks specified in subrule (3)(d) of this rule every 6 months for as long as the system exceeds the lead action level.
- (5) Within 60 days after a nontransient, noncommunity water system exceeds the lead action level, unless the supplier is already repeating public education tasks pursuant to subrule (6) of this rule, the supplier shall deliver the public education materials specified in the applicable provisions of 40 C.F.R. §141.85(a)(1), as adopted by reference in subrule (1) of this rule, or the public education materials specified by 40 C.F.R. §141.85(a)(2), as follows:
- (a) Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system.
  - (b) Distribute informational pamphlets or brochures, or both, on lead in drinking water to each person who is served by the nontransient, noncommunity water system. The department may allow the supplier to utilize electronic transmission instead of or combined with printed materials as long as it achieves at least the same coverage.
- (6) The supplier of a nontransient, noncommunity water system shall repeat the tasks specified in subrule (5) of this rule at least once during each calendar year in which the system exceeds the lead action level.
- (7) A supplier may discontinue delivery of public education materials if the system subject to this rule has met the lead action level during the most recent 6-month monitoring period conducted under R325.10710a. The supplier shall recommence public education under this rule if it subsequently exceeds the lead action level during a monitoring period.
- (8) The supplier of a community water system may apply to the department, in writing, unless the department has waived the requirement for prior department approval, to use the text specified in 40 C.F.R. §141.85(a)(2), as adopted by reference in subrule (1) of this rule, instead of the text in 40 C.F.R. §141.85(a)(1) and to perform the tasks listed in subrules (5) and (6) of this rule instead of the tasks in subrules (3) and (4) of this rule if both of the following provisions are satisfied:
- (a) The system is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices.

(b) The supplier provides water as part of the cost of services provided and does not separately charge for water consumption.

(9) Both of the following provisions apply to community water supplies serving 3,300 or fewer people:

(a) If a community water system serves 3,300 or fewer people, then the supplier may omit the task contained in subrule (3)(d) of this rule. As long as it distributes notices containing the information contained in 40 C.F.R §141.85(a)(1), as adopted by reference in subrule (1) of this rule, to every household served by the system, those suppliers may further limit their public education programs as follows:

(i) If a system serves 500 or fewer people, then the supplier may forego the task contained in subrule (3)(b) of this rule. The supplier may limit the distribution of the public education materials required under subrule (3)(c) of this rule to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children, unless it is notified by the department, in writing, that it shall make a broader distribution.

(ii) If a system serves 501 to 3,300 people, then the supplier, if approved by the department in writing, may omit the task in subrule (3)(b) of this rule or limit the distribution of the public education materials required under subrule (3)(c) of this rule to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children, or may do both.

(b) The supplier of a community water system serving 3,300 or fewer people that delivers public education under subdivision (a)(i) of this subrule shall repeat the required public education tasks at least once during each calendar year in which the system exceeds the lead action level.



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**ADMINISTRATIVE RULES**


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**ORR # 2001-005****DEPARTMENT OF ENVIRONMENTAL QUALITY****DRINKING WATER AND RADIOLOGICAL PROTECTION DIVISION****SUPPLYING WATER TO THE PUBLIC**

Filed with the Secretary of State on May 22, 2002

These rules take effect 7 days after filing with the Secretary of State

(By authority conferred on the department of environmental quality by sections 5, 7, 14, and 19 of 1976 PA 399, MCL 325.1005, 325.1007, 325.1014, and 325.1019, and Executive Reorganization Order No. 1996-1, MCL 330.3101)

R 325.10604c and R 325.10604f of the Michigan Administrative Code are amended as follows:

**PART 6. STATE DRINKING WATER STANDARDS AND ANALYTICAL TECHNIQUES****R 325.10604c MCL for inorganic chemicals.**

Rule 604c. (1) Except as specified, the MCLs and effective dates for inorganic chemicals in table 1 of this rule apply to community water systems and nontransient noncommunity water systems. The MCLs for fluoride and arsenic apply only to community water systems. The MCLs for nitrate, nitrite, and total nitrate and nitrite apply to community and noncommunity water systems.

Table 1

Contaminant	Maximum Contaminant Level in mg/l	Effective Date
Antimony	0.006	January 17, 1994.
Arsenic	0.05	June 24, 1977.
Asbestos	7 million fibers per liter (longer than 10 um)	July 30, 1992.
Barium	2	January 1, 1993.
Beryllium	0.004	January 17, 1994.
Cadmium	0.005	July 30, 1992.
Chromium	0.1	July 30, 1992.
Cyanide (as free cyanide)	0.2	January 17, 1994.
Fluoride	4	October 2, 1987.
Mercury	0.002	July 30, 1992.
Nickel	MCL withdrawn	(effective date)
Nitrate (as Nitrogen)	10	July 30, 1992.

Nitrite (as Nitrogen)	1	July 30, 1992.
Total Nitrate and Nitrite (as Nitrogen)	10	July 30, 1992.
Selenium	0.05	July 30, 1992.
Thallium	0.002	January 17, 1994.

(2) Compliance with the MCL requirements of this rule shall be determined based on the analytical results that are obtained at each sampling point as specified in R 325.10710.

(3) For suppliers that conduct monitoring more than once each year, compliance with the MCL for antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, or thallium is determined by a running annual average at any sampling point. If the average at any sampling point is more than the MCL, then the system is out of compliance. If any 1 sample would cause the annual average to be exceeded, then the system is out of compliance immediately. Any sample that is below the method detection limit shall be calculated at zero for the purpose of determining the annual average.

(4) For suppliers that monitor annually or less frequently, the system is out of compliance with the MCL for antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, or thallium if the level of a contaminant at any sampling point is more than the MCL. If a confirmation sample is required by the department, then the determination of compliance will be based on the average of the 2 samples.

(5) Compliance with the MCLs for nitrate and nitrite is determined based on 1 sample if the levels of these contaminants are below the MCLs. If the level of nitrate or nitrite or the combination of nitrate and nitrite is more than the MCLs in the initial sample, then a confirmation sample is required pursuant to the provisions of R 325.10710(9)(b) and (c), and compliance shall be determined based on the average of the initial and confirmation samples.

(6) The department may allow nitrate levels above 10 milligrams per liter but not more than 20 milligrams per liter in a noncommunity water system if the supplier demonstrates, to the satisfaction of the department, all of the following:

- (a) A permanent alternate source of water meeting state drinking water standards can not be obtained.
- (b) The water will not be available to children under 6 months of age.
- (c) Water meeting state drinking water standards, such as bottled water, will be provided to those who request it.
- (d) There is continuous posting at all drinking water outlets available to the public that nitrate levels exceed 10 mg/l and the potential health effects of exposure as specified in part 4 of these rules.
- (e) Adverse health effects are not documented.

#### **R 325.10604f Treatment techniques for lead and copper.**

Rule 604f. (1) Treatment techniques for lead and copper are as follows:

- (a) The requirements of this rule constitute the drinking water standards for lead and copper. Unless otherwise indicated, this rule applies to community water systems and nontransient, noncommunity water systems.
- (b) These regulations establish a treatment technique that includes requirements for corrosion control treatment, source water treatment, lead service line replacement, and public education. These requirements are triggered, in some cases, by lead and copper action levels measured in samples that are collected at consumers' taps.
- (c) The lead action level is exceeded if the ninetieth percentile lead level is more than 0.015 milligrams per liter (mg/l) in tap water samples collected during a monitoring period conducted under R 325.10710a.

The copper action level is exceeded if the ninetieth percentile copper level is more than 1.3 mg/l in tap water samples collected during a monitoring period conducted under R 325.10710a.

The ninetieth percentile lead and copper levels shall be computed as follows:

(i) The results of all lead or copper samples taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sampling result shall be assigned a number, ascending by single integers beginning with the number 1 for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken.

(ii) The number of samples taken during the monitoring period shall be multiplied by 0.9.

(iii) The contaminant concentration in the numbered sample yielded by the calculation in paragraph (ii) of this subdivision is the ninetieth percentile contaminant level.

(iv) If a total of 5 samples are collected per monitoring period, the ninetieth percentile is computed by taking the average of the highest and second highest concentrations. If fewer than 5 samples are collected, the ninetieth percentile is the highest concentration in 1 sample for purposes of this rule.

(d) A supplier shall install and operate optimal corrosion control treatment on the system under subrules (2) and (3) of this rule. A system that is in compliance with the applicable corrosion control treatment requirements specified by the department under subrules (2) and (3) of this rule is in compliance with the treatment requirement.

(e) If a system exceeds the lead or copper action level, the supplier shall implement all applicable source water treatment requirements specified by the department under subrule (4) of this rule.

(f) If a system exceeds the lead action level after implementation of applicable corrosion control and source water treatment requirements, the supplier shall complete the lead service line replacement requirements contained in subrule (5) of this rule.

(g) If a system exceeds the lead action level, the supplier shall implement the public education requirements specified in R 325.10410.

(h) Tap water monitoring for lead and copper, monitoring for water quality parameters, source water monitoring for lead and copper, and analyses of the monitoring results under this subrule shall be completed pursuant to R 325.10605, R 325.10710a, R 325.10710b, and R 325.10710c.

(i) A supplier shall report, to the department, the information required by the treatment provisions of this subrule and R 325.10710d.

(j) A supplier shall maintain records under R 325.11506(1)(e).

(k) Failure to comply with the applicable requirements of this rule, R 325.10410, R 325.10710a, R 325.10710b, R 325.10710c, R 325.10605, R 325.10710d, and R 325.11506(1)(e) constitutes a violation of the drinking water standards for lead or copper, as applicable.

(2) Corrosion control treatment steps apply to small, medium-size, and large water systems as follows:

(a) A supplier shall complete the applicable corrosion control treatment requirements described in subrule (3) of this rule by the deadlines established in this rule. The supplier of a large water system (serving more than 50,000 persons) shall complete the corrosion control treatment steps specified in subdivision (d) of this subrule, unless the supplier is considered to have optimized corrosion control under subdivision (b)(ii) or (iii) of this subrule. The supplier of a small water system (serving 3,300 or fewer persons) or a medium-size water system (serving more than 3,300, but fewer than 50,001 persons) shall complete the corrosion control treatment steps specified in subdivision (e) of this subrule unless the supplier is considered to have optimized corrosion control under subdivision (b)(i), (ii), or (iii) of this subrule.

(b) A supplier is considered to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps identified in subrule (3) of this rule if the system is in compliance with 1 of the

criteria specified in paragraphs (i) through (iii) of this subdivision. A supplier which is considered to have optimized corrosion control under this subdivision and which has treatment in place shall continue to operate and maintain optimal corrosion control treatment and meet the requirements that the department determines appropriate to ensure optimal corrosion control treatment is maintained. All of the following provisions apply to being considered to have optimized corrosion control:

(i) A supplier of a small or medium-size water system is considered to have optimized corrosion control if the system is in compliance with the lead and copper action levels during each of 2 consecutive 6-month monitoring periods during which monitoring is conducted under R 325.10710a.

(ii) A supplier may be considered by the department to have optimized corrosion control treatment if the supplier demonstrates, to the satisfaction of the department, that it has conducted activities equivalent to the corrosion control steps applicable to the system under subrule (3) of this rule. Suppliers considered to have optimized corrosion control under this subdivision shall operate in compliance with the department-designated optimal water quality control parameters under subrule (3)(f) of this rule and continue to conduct lead and copper tap and water quality parameter sampling under R 325.10710a(4)(c) and R 325.10710b(4), respectively. A supplier shall provide the department with all of the following information to support a determination under this subdivision:

(A) The results of all test samples collected for each of the water quality parameters specified in subrule (3)(c)(iii) of this rule.

(B) A report that explains the test methods used by the supplier to evaluate the corrosion control treatments listed in subrule (3) of this rule, the results of all tests conducted, and the basis for the supplier's selection of optimal corrosion control treatment.

(C) A report that explains how corrosion control has been installed and how it is being maintained to ensure minimal lead and copper concentrations at consumers' taps.

(D) The results of tap water samples collected under R 325.10710a at least once every 6 months for 1 year after corrosion control has been installed.

(iii) A supplier is considered to have optimized corrosion control for the system if it submits results of tap water monitoring conducted under R 325.10710a and source water monitoring conducted under R 325.10710c that demonstrates, for 2 consecutive 6-month monitoring periods, that the difference between the ninetieth percentile tap water lead level computed under subrule (1)(c) of this rule and the highest source water lead concentration is less than the practical quantitation level for lead. In addition, all of the following provisions apply:

(A) A supplier of a system where the highest source water lead level is below the method detection limit is considered to have optimized corrosion control under this paragraph if the system's ninetieth percentile tap water lead level is less than or equal to the practical quantitation level for lead for 2 consecutive 6-month monitoring periods.

(B) A supplier considered to have optimized corrosion control under this paragraph shall continue monitoring for lead and copper at the tap not less frequently than once every 3 calendar years using the reduced number of sites specified in R 325.10710a(3) and collecting the samples at times and locations specified in R 325.10710a(4)(d)(iv).

(C) A supplier considered to have optimized corrosion control pursuant to this subdivision shall notify the department, in writing, pursuant to R 325.10710d(a)(iii) of a change in treatment or the addition of a new source. The department may require the supplier to conduct additional monitoring or to take other action the department considers appropriate consistent with the requirements of R 325.10604f(2) to ensure that the supplier maintains minimal levels of corrosion in the distribution system.

(D) As of July 12, 2001, a supplier is not considered to have optimized corrosion control under this subdivision, and shall implement corrosion control treatment pursuant to subparagraph (E) of this paragraph unless it meets the copper action level.

(E) A supplier that is no longer considered to have optimized corrosion control under this subdivision shall implement corrosion control treatment under the deadlines in subdivision (e) of this subrule. The supplier of a large water system shall adhere to the schedule specified in that subdivision for medium-size water systems, with the time periods for completing each step being triggered by the date the supplier is no longer considered to have optimized corrosion control under this subdivision.

(c) If a small or medium-size water system exceeds the lead or copper action level and the supplier is required to perform the corrosion control treatment steps, the supplier may cease completing the treatment steps when the system is in compliance with both action levels during each of 2 consecutive monitoring periods conducted under R 325.10710a and the supplier submits the results to the department. If the system thereafter exceeds the lead or copper action level during a monitoring period, the supplier shall recommence the applicable treatment steps beginning with the first treatment step that was not previously completed in its entirety. The department may require a supplier to repeat treatment steps that were previously completed by the supplier if the department determines that this is necessary to properly implement the treatment requirements of this rule. If a small or medium-size water system exceeds the lead or copper action level, the supplier, including suppliers considered to have optimized corrosion control under subdivision (b) of this subrule, shall implement corrosion control treatment steps under subdivision (e) of this subrule.

(d) Except as provided in subdivisions (b)(ii) and (iii) of this subrule, a supplier of a large water system shall complete all of the following corrosion control treatment steps by the indicated dates:

(i) Step 1: A supplier shall conduct initial monitoring during 2 consecutive 6-month monitoring periods by January 1, 1993.

(ii) Step 2: A supplier shall complete corrosion control studies by July 1, 1994.

(iii) Step 3: By January 1, 1997, a supplier shall install optimal corrosion control treatment as designated by the department.

(iv) Step 4: A supplier shall complete follow-up sampling by January 1, 1998.

(v) Step 5: A supplier shall operate in compliance with the department-specified optimal water quality control parameters and continue to conduct tap sampling.

(e) Except as provided in subdivision (b) of this subrule, the suppliers of small and medium-size water systems shall complete all of the following corrosion control treatment steps by the indicated time periods:

(i) Step 1: A supplier shall conduct initial tap sampling until the system either exceeds the lead or copper action level or becomes eligible for reduced monitoring. The supplier of a system that exceeds the lead or copper action level shall recommend optimal corrosion control treatment within 6 months after the system exceeds 1 of the action levels.

(ii) Step 2: Within 12 months after a system exceeds the lead or copper action level, the department may require the supplier to perform corrosion control studies.

(iii) Step 3: If the department requires a supplier to perform corrosion control studies, the supplier shall complete the studies within 18 months after the department requires that the studies be conducted.

(iv) Step 4: A supplier shall install optimal corrosion control treatment within 24 months after the department designates the treatment.

(v) Step 5: A supplier shall complete follow-up sampling within 36 months after the department designates optimal corrosion control treatment.

(vi) Step 6: A supplier shall operate in compliance with the department-designated optimal water quality control parameters and continue to conduct tap sampling.

(3) A supplier shall complete all the corrosion control treatment requirements described in this subrule that are applicable to the system under subrule (2) of this rule:

(a) Based on the results of lead and copper tap monitoring and water quality parameter monitoring, the suppliers of small and medium-size water systems that exceed the lead or copper action level shall recommend the installation of 1 or more of the corrosion control treatments listed in subdivision (c)(i) of this subrule that the supplier believes constitutes optimal corrosion control for that system. The department may require the supplier to conduct additional water quality parameter monitoring under R 325.10710b(4) to assist the department in reviewing the supplier's recommendation.

(b) When required by the department, the supplier of a small or medium-size water system that exceeds the lead or copper action level shall perform corrosion control studies under subdivision (c) of this subrule to identify optimal corrosion control treatment for the system.

(c) Perform corrosion control studies as follows:

(i) A supplier that performs corrosion control studies shall evaluate the effectiveness of each of the following treatments and, if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for that system:

(A) Alkalinity and pH adjustment.

(B) Calcium hardness adjustment.

(C) The addition of a phosphate or silicate-based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.

(ii) The supplier shall evaluate each of the corrosion control treatments using pipe rig/loop tests, metal coupon tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry, and distribution system configuration.

(iii) A supplier shall measure all of the following water quality parameters in tests conducted under this paragraph before and after evaluating the corrosion control treatments listed in paragraph (i)(A) to (C) of this subdivision:

(A) Lead.

(B) Copper.

(C) pH.

(D) Alkalinity.

(E) Calcium.

(F) Conductivity.

(G) Orthophosphate, when an inhibitor containing a phosphate compound is used.

(H) Silicate, when an inhibitor containing a silicate compound is used.

(I) Water temperature.

(iv) The supplier shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and shall document the constraints with 1 or both of the following:

(A) Data and documentation demonstrating that a particular corrosion control treatment has adversely affected other water treatment processes when used by another system with comparable water quality characteristics.

(B) Data and documentation demonstrating that the supplier has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes.

(v) A supplier shall evaluate the effect of the chemicals used for corrosion control treatment in other water quality treatment processes.

(vi) On the basis of an analysis of the data generated during each evaluation, a supplier shall recommend, to the department, in writing, the treatment option that the corrosion control studies indicate constitutes optimal

corrosion control treatment for that system. The supplier shall provide a rationale for its recommendation together with all supporting documentation specified in paragraphs (i) to (v) of this subdivision.

(d) Department designation of optimal corrosion control treatment shall be as follows:

(i) Based on consideration of available information, including, where applicable, studies performed under subdivision (c) of this subrule and a supplier's recommended treatment alternative, the department will either approve the corrosion control treatment option recommended by the supplier or will designate alternative corrosion control treatment from the treatment specified in subdivision (c)(i) of this subrule. When designating optimal treatment, the department shall consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes.

(ii) If the department requests additional information to aid its review, the supplier shall provide the information.

(e) Each supplier shall properly install and operate, throughout its distribution system, the optimal corrosion control treatment designated by the department.

(f) All suppliers optimizing corrosion control shall continue to operate and maintain optimal corrosion control treatment, including maintaining water quality parameters at or above minimum values or within ranges designated by the department, under this subdivision for all samples collected under R 325.10710b(6) through (8). Compliance with the requirements of this subdivision shall be determined every 6 months, as specified under R 325.10710b(6). A system is out of compliance with the requirements of this subdivision for a 6-month period if it has excursions for a department-specified parameter on more than 9 days during the period. An excursion occurs when the daily value for 1 or more of the water quality parameters measured at a sampling location is below the minimum value or outside the range designated by the department. The department may delete results of obvious sampling errors from this calculation. Daily values are calculated as follows:

(i) On days when more than 1 measurement for the water quality parameter is collected at the sampling location, the daily value shall be the average of all results collected during the day regardless of whether they are collected through continuous monitoring, grab sampling, or a combination of both.

(ii) On days when only 1 measurement for the water quality parameter is collected at the sampling location, the daily value shall be the result of that measurement.

(iii) On days when a measurement is not collected for the water quality parameter at the sampling location, the daily value shall be the daily value calculated on the most recent day on which the water quality parameter was measured at the sample site.

(g) The department's determination of the optimal corrosion control treatment specified in subdivision (d) of this subrule or optimal water quality control parameters may be modified by the department. If a request for modification is by a supplier or other interested person, the request shall be in writing, shall explain why the modification is appropriate, and shall provide supporting documentation. The department may modify its determination where it concludes that a change is necessary to ensure that the supplier continues to optimize corrosion control treatment.

(4) A supplier shall complete the applicable source water monitoring and treatment requirements by the following deadlines:

(a) The deadlines for completing source water treatment steps are as follows:

(i) Step 1: The supplier of a system that exceeds the lead or copper action level shall complete lead and copper source water monitoring and make a treatment recommendation to the department within 6 months after exceeding the lead or copper action level.

(ii) Step 2: If the department requires installation of source water treatment, the supplier shall install the treatment within 24 months after the date of written notification by the department.

(iii) Step 3: The supplier shall complete follow-up tap water monitoring and source water monitoring within 36 months after the date of written notification by the department.

(iv) Step 4: A supplier shall operate a system in compliance with the department-specified maximum permissible lead and copper source water levels and shall continue source water monitoring.

(b) Source water treatment requirements are as follows:

(i) The supplier of a system that exceeds the lead or copper action level shall recommend, in writing, to the department, the installation and operation of 1 of the source water treatments listed in paragraph (ii) of this subdivision. A supplier may recommend that no treatment be installed based on a demonstration that source water treatment is not necessary to minimize lead and copper levels at users' taps.

(ii) If the department determines that source water treatment is needed to minimize lead or copper levels in water that is delivered to users' taps, the department will either require installation and operation of the source water treatment recommended by the supplier or require the installation and operation of another source water treatment from among the following alternatives:

(A) Ion exchange.

(B) Reverse osmosis.

(C) Lime softening.

(D) Coagulation/filtration.

If the department requests additional information to aid in its review, the supplier shall provide the information by the date specified by the department in its request.

(iii) A supplier shall properly install and operate the source water treatment designated by the department under paragraph (ii) of this subdivision.

(iv) A supplier shall maintain lead and copper levels below the maximum permissible concentrations designated by the department at each sampling point monitored under R 325.10710c. A system is out of compliance with this subrule if the level of lead or copper at a sampling point is more than the maximum permissible concentration designated by the department.

(v) Upon its own initiative or in response to a request by a supplier or other interested person, the department may modify its determination of the source water treatment or maximum permissible lead and copper concentrations for finished water entering the distribution system. A request for modification by a supplier or other interested person shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The department may modify its determination where it concludes that a change is necessary to ensure that the supplier continues to minimize lead and copper concentrations in source water.

(5) Lead service line replacement requirements are as follows:

(a) A supplier of a system that exceeds the lead action level in tap samples taken pursuant to R 325.10710a(4)(b) after installing corrosion control or source water treatment, or both, whichever sampling occurs later, shall replace lead service lines under the requirements of this subrule. If a supplier is in violation of subrule (2) or (4) of this rule for failure to install source water or corrosion control treatment, then the department may require the supplier to commence lead service line replacement after the date that the supplier was required to conduct monitoring under R 325.10710a(4)(b).

(b) Annually, a supplier shall replace not less than 7% of the initial number of lead service lines in its distribution system. The initial number of lead service lines is the number of lead lines in place when the replacement program begins. The supplier shall identify the initial number of lead service lines in its distribution system, including an identification of the portion or portions owned by the system, based on a materials evaluation, including the evaluation required under R 325.10710a(1) and relevant legal authorities, for example, contracts and local ordinances, regarding the portion owned by the system. The first year of lead service line replacement shall begin on the date that the action level was exceeded in tap sampling referenced in subdivision (a) of this subrule.



- (c) A supplier is not required to replace an individual lead service line if the lead concentration in all service line samples from that line, taken under R 325.10710a(2)(c), is less than or equal to 0.015 mg/l.
- (d) A supplier shall replace that portion of the lead service line that the system owns. If the system does not own the entire lead service line, the supplier shall notify the owner of the line, or the owner's authorized agent, that the supplier will replace the portion of the service line that it owns and shall offer to replace the owner's portion of the line. A supplier is not required to bear the cost of replacing the privately owned portion of the line, nor is it required to replace the privately owned portion where the owner chooses not to pay the cost of replacing the privately owned portion of the line, or where replacing the privately owned portion would be precluded by state, local, or common law. A supplier that does not replace the entire length of the service line also shall complete both of the following tasks:
- (i) Not less than 45 days before commencing with the partial replacement of a lead service line, the supplier shall provide notice to the resident or residents of all buildings served by the line explaining that they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures consumers can take to minimize their exposure to lead. The supplier may provide notice under the previous sentence less than 45 days before commencing partial lead service line replacement where the replacement is in conjunction with emergency repairs. In addition, the supplier shall inform the resident or residents served by the line that the supplier will, at the supplier's expense, collect a sample from each partially replaced lead service line that is representative of the water in the service line for analysis of lead content, as prescribed under R 325.10710a(2)(c), within 72 hours after the completion of the partial replacement of the service line. The supplier shall collect the sample and report the results of the analysis to the owner and the resident or residents served by the line within 3 business days of receiving the results. Mailed notices postmarked within 3 business days of receiving the results are satisfactory.
- (ii) The supplier shall provide the information required by paragraph (i) of this subdivision to the residents of individual dwellings by mail or by other methods approved by the department. If multifamily dwellings are served by the line, the supplier shall have the option to post the information at a conspicuous location.
- (e) A supplier may cease replacing lead service lines when first-draw samples collected under R 325.10710a(2)(b) meet the lead action level during each of 2 consecutive monitoring periods and the supplier submits the results to the department. If the first-draw samples thereafter exceed the lead action level, the supplier shall recommence replacing lead service lines under subdivision (b) of this subrule.
- (f) To demonstrate compliance with subdivisions (a) to (d) of this subrule, a supplier shall report the information specified in R 325.10710d(e) to the department.

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**ADMINISTRATIVE RULES**

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**ORR # 2001-006**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**DRINKING WATER AND RADIOLOGICAL PROTECTION DIVISION**

**SUPPLYING WATER TO THE PUBLIC**

Filed with the Secretary of State on May 22, 2002

These rules take effect 7 days after filing with the Secretary of State

(By authority conferred on the department of environmental quality by sections 5, 7, 14, and 19 of 1976 PA 399, MCL 325.1005, 325.1007, 325.1014, and 325.1019, and Executive Reorganization Order No. 1996-1, MCL 330.3101)

R 325.10705, R 325.10710, R 325.10710a to R 325.10710d, R 325.10716, R 325.10717b, and R 325.10734 of the Michigan Administrative Code are amended, and R 325.10736 and R 325.10738 of the Code are rescinded, as follows:

**PART 7. SURVEILLANCE, INSPECTION, AND MONITORING**

**R 325.10705 Collection and analysis of samples for coliform bacteria; community water systems.**

Rule 705. (1) A supplier of water of a community water system shall collect samples of water to be analyzed for the presence of coliform bacteria at sites which are representative of water throughout the distribution system according to a written sample siting plan that is subject to department review and revision.

(2) The monitoring frequency for total coliforms for a community water system is based on the population served by the system as set forth in table 1 of this rule:

Table 1 Total Coliform Monitoring Frequency for Community Water Supplies

Population Served	Minimum Number of Samples Per Month
25 to 1,000 *	1
1,001 to 2,500	2
2,501 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6

5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 12,900	10
12,901 to 17,200	15
17,201 to 21,500	20
21,501 to 25,000	25
25,001 to 33,000	30
33,001 to 41,000	40
41,001 to 50,000	50
50,001 to 59,000	60
59,001 to 70,000	70
70,001 to 83,000	80
83,001 to 96,000	90
96,001 to 130,000	100
130,001 to 220,000	120
220,001 to 320,000	150
320,001 to 450,000	180
450,001 to 600,000	210
600,001 to 780,000	240
780,001 to 970,000	270
970,001 to 1,230,000	300
1,230,001 to 1,520,000	330
1,520,001 to 1,850,000	360
1,850,001 to 2,270,000	390
2,270,001 to 3,020,000	420
3,020,001 to 3,960,000	450
3,960,001 or more	480

\* Includes public water supplies which have not less than 15 service connections, but which serve fewer than 25 persons.

(3) If a community water system that serves 25 to 1,000 persons does not have a history of total coliform contamination in its current configuration and a sanitary survey conducted in the past 5 years shows that the system is supplied solely by a protected groundwater source and is free of sanitary defects, the department may reduce the monitoring frequency specified in table 1 of this rule, except that the department shall not reduce the monitoring frequency to less than 1 sample per quarter. To be valid, the reduced monitoring frequency shall be approved, in writing, by the department.

(4) Suppliers of water for all community water systems and noncommunity water systems shall collect samples at regular time intervals throughout the monitoring period, except for those groundwater supplies which serve fewer than 4,901 persons and which are not influenced by surface water. Groundwater suppliers that serve fewer than 4,901 persons may collect all required samples on a single day if the samples are taken from different sites.

**R 325.10710 Collection and analysis of samples for inorganic chemicals.**

Rule 710. (1) Suppliers of water of community water systems and noncommunity water systems shall collect water samples and cause analyses to be made for inorganic chemicals to determine compliance with the state drinking water standards as set forth in R 325.10604c. Suppliers shall monitor at the time designated by the department during each compliance period.

(2) The department may require samples to be collected and analyzed at a prescribed frequency for inorganic chemicals for type III public water supplies.

(3) Beginning in the initial compliance period, suppliers of community water systems and nontransient, noncommunity water systems shall monitor under this rule to determine compliance with the MCLs for inorganic contaminants outlined in R 325.10604c. Beginning in the initial compliance period, suppliers of transient, noncommunity water systems shall monitor under this rule to determine compliance with the nitrate, nitrite, and total nitrate and nitrite MCLs in R 325.10604c.

(4) Suppliers shall monitor as follows:

(a) Suppliers of water from groundwater systems shall take a minimum of 1 sample at every entry point to the distribution system representative of each well after treatment. The supplier shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

(b) Suppliers of water from surface water systems, or combined surface water and groundwater systems, shall take a minimum of 1 sample at every entry point to the distribution system after any application of treatment or in the distribution system at a sampling point that is representative of each source after treatment. The supplier shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

(c) If a system draws water from more than 1 source and the sources are combined before distribution, the supplier shall sample at an entry point to the distribution system during periods when water is representative of all sources being used.

(d) The total number of samples that shall be analyzed to meet the requirements of this rule may be reduced by the department when compositing of samples is utilized. Provisions for compositing of samples are as follows:

(i) Composite samples from a maximum of 5 sampling points are allowed.

(ii) Compositing of samples shall be done in the laboratory.

(iii) If the concentration in the composite sample is greater than or equal to 1/5 of the MCL of any inorganic chemical, then a follow-up sample shall be collected within 14 days from each sampling point included in the composite. These samples shall be analyzed for the contaminants that exceeded 1/5 of the MCL in the composite sample.

(iv) Compositing shall only be performed using samples from within a single water system.

(v) If duplicates of the original sample taken from each sampling point used in the composite are available, then the supplier may use these instead of resampling. The duplicates shall be analyzed and the results reported to the department within 14 days of collection.

(5) The monitoring frequency conducted to determine compliance with the MCLs in R 325.10604c for antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, and thallium shall be as follows:

(a) Suppliers of water of groundwater systems shall take 1 sample at each sampling point during each compliance period. Suppliers of water of surface water systems or combined surface water and groundwater systems shall take 1 sample annually at each sampling point.

(b) A supplier of water may apply to the department for a waiver from the monitoring frequencies specified in subdivision (a) of this subrule. The department may grant a waiver for monitoring cyanide if the department determines the system is not vulnerable due to the lack of any industrial source of cyanide. Waiver provisions are as follows:

- (i) A supplier shall take a minimum of 1 sample while the waiver is effective.
- (ii) The term during which a waiver is effective shall not be more than 1 compliance cycle.
- (iii) A waiver may be granted if a surface water supplier has monitored annually for not less than 3 years or a groundwater supplier has conducted not less than 3 rounds of monitoring. At least 1 sample shall have been taken since January 1, 1990. Both surface and groundwater suppliers shall demonstrate that all previous analytical results were less than the MCL. Supplies that use a new water source are not eligible for a waiver until 3 rounds of monitoring from the new source have been completed.
- (iv) The department shall consider all of the following factors to determine the appropriate reduced monitoring frequency:

- (A) Reported concentrations from all previous monitoring.
- (B) The degree of variation in reported concentrations.
- (C) Other factors that may affect contaminant concentrations, such as changes in any of the following:
  - (1) Groundwater pumping rates.
  - (2) The system's configuration.
  - (3) The system's operating procedures.
  - (4) Stream flows or characteristics.

(v) A waiver shall be in writing and shall set forth the basis for the determination. The determination may be initiated by the department or upon an application by the public water supplier specifying the basis for its request. The department may revise the determination based on new data.

(c) Suppliers of systems exceeding the MCLs in R 325.10604c shall monitor quarterly beginning in the next quarter after the violation occurred. The department may decrease the quarterly monitoring requirement to the frequencies specified in subdivisions (a) and (b) of this subrule if it has determined that the system is reliably and consistently below the MCL. A groundwater supplier shall take not less than 2 quarterly samples and a surface water supplier shall take not less than 4 quarterly samples before the department's determination.

(6) The monitoring frequency conducted to determine compliance with the MCL in R 325.10604c for asbestos shall be as follows:

(a) Suppliers of each community water system and nontransient, noncommunity water system shall monitor for asbestos during the first 3-year compliance period of each 9-year compliance cycle beginning in the compliance period starting January 1, 1993.

(b) If the supplier believes its water is not vulnerable to either asbestos contamination in its source water or asbestos contamination due to corrosion of asbestos-cement pipe, or both, it may apply to the department for a waiver of the monitoring requirement in subdivision (a) of this subrule. If the department grants the waiver, the supplier is not required to monitor. A waiver remains in effect until the completion of the 3-year compliance period. The department may grant a waiver based on a consideration of both of the following factors:

- (i) Potential asbestos contamination of the water source.
- (ii) The use of asbestos-cement pipe for finished water distribution and the corrosive nature of the water.
- (c) A supplier of a system vulnerable to asbestos contamination due solely to the corrosion of asbestos-cement pipe shall take 1 sample at a tap served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.

(d) A supplier of a system vulnerable to asbestos contamination due solely to source water shall monitor under subrule (4) of this rule.

(e) A supplier of a system vulnerable to asbestos contamination due both to its source water supply and corrosion of asbestos-cement pipe shall take 1 sample at a tap served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.

(f) A supplier of a system exceeding the MCLs in R 325.10604c shall monitor quarterly beginning in the next quarter after a violation occurred.

(g) The quarterly monitoring requirement may be decreased by the department to the frequency specified in subdivision (a) of this subrule if the department determines that the system is reliably and consistently below the MCL. A groundwater supplier shall take a minimum of 2 quarterly samples and a surface water or combined surface water and groundwater supplier shall take a minimum of 4 quarterly samples before this determination.

(h) If monitoring data collected after January 1, 1990, are generally consistent with the requirements of this subrule, then that data may be used to satisfy the monitoring requirement for the initial compliance period beginning January 1, 1993.

(7) The monitoring frequency conducted to determine compliance with the MCLs in R 325.10604c for nitrate shall be as follows:

(a) Community water systems and nontransient, noncommunity water systems served by groundwater systems shall be monitored annually. Systems served by surface water shall be monitored quarterly.

(b) For community water systems and nontransient, noncommunity water systems, the repeat monitoring frequency for groundwater systems shall be quarterly for at least 1 year following any 1 sample in which the concentration is 50% or more of the MCL. The sampling frequency for groundwater systems may be reduced by the department to annually after 4 consecutive quarterly samples are reliably and consistently less than the MCL.

(c) For community water systems and nontransient, noncommunity water systems, the department may allow a surface water supplier to reduce the sampling frequency to annually if all analytical results from 4 consecutive quarters are less than 50% of the MCL. A surface water supplier shall return to quarterly monitoring if any 1 sample is 50% or more of the MCL.

(d) Suppliers of transient, noncommunity water systems shall monitor annually.

(e) After the initial round of quarterly sampling is completed, suppliers of community water systems and nontransient, noncommunity water systems that are monitored annually shall take subsequent samples during the quarter or quarters which previously resulted in the highest analytical result.

(8) The monitoring frequency conducted to determine compliance with the MCLs in R 325.10604c for nitrite shall be as follows:

(a) A supplier of a community water system or a noncommunity water system shall take 1 sample at each sampling point in the compliance period beginning January 1, 1993, and ending December 31, 1995.

(b) After the initial sample, suppliers of systems where an analytical result for nitrite is less than 50% of the MCL shall monitor at the frequency specified by the department.

(c) The repeat monitoring frequency for a system shall be quarterly for at least 1 year following any 1 sample in which the concentration is 50% or more of the MCL. The department may allow a supplier to reduce the sampling frequency to annually after determining the system is reliably and consistently less than the MCL.

(d) Suppliers monitoring annually shall take each subsequent sample during the quarter or quarters that previously resulted in the highest analytical result.

(9) Confirmation samples are required as follows:

(a) Where the results of sampling for any of the following indicate a level that is more than the MCL, the department may require that 1 additional sample be collected as soon as possible after the initial sample was taken, but not more than 2 weeks later, at the same sampling point:

(i) Asbestos.

- (ii) Antimony.
- (iii) Barium.
- (iv) Beryllium.
- (v) Cadmium.
- (vi) Chromium.
- (vii) Cyanide.
- (viii) Fluoride.
- (ix) Mercury.
- (x) Nickel.
- (xi) Selenium.
- (xii) Thallium.

(b) Where nitrate or nitrite sampling results indicate a level that is more than the MCL, the supplier shall take a confirmation sample within 24 hours of the supplier's receipt of notification of the analytical results of the first sample. Suppliers that are unable to comply with the 24-hour sampling requirement shall immediately notify the persons served by the area served by the public water system under part 4 of these rules and shall analyze a confirmation sample within 2 weeks of notification of the analytical results of the first sample.

(c) If a confirmation sample required by the department is taken for any contaminant, then the results of the initial and confirmation sample shall be averaged. The resulting average shall be used to determine the system's compliance under R 325.10604c(2), (3), (4), and (5). Results of obvious sampling errors may be deleted by the department.

(d) The department may require more frequent monitoring than specified in this rule or may require confirmation samples for positive or negative results.

(e) Suppliers may apply to the department to conduct more frequent monitoring than the minimum monitoring frequencies specified in this rule.

#### **R 325.10710a Monitoring requirements for lead and copper in tap water.**

Rule 710a. (1) Sample site location provisions for lead and copper monitoring in tap water are as follows:

(a) By the applicable date for the commencement of monitoring under subrule (4)(a) of this rule, each supplier shall complete a materials evaluation of its distribution system to identify a pool of targeted sampling sites that is in compliance with the requirements of this rule and that is large enough to ensure that the supplier can collect the number of lead and copper tap samples required under subrule (3) of this rule. All sites from which first draw samples are collected shall be selected from the pool of targeted sampling sites. Sampling sites may include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants only if the devices have been approved by the department for the purpose of optimizing corrosion control.

(b) A supplier shall use the information on lead, copper, and galvanized steel that it is required to collect under 40 C.F.R. §141.42(d), December 5, 1994, (Special Monitoring for Corrosivity Characteristics) when conducting a materials evaluation. When an evaluation of the information collected under 40 C.F.R. §141.42(d), is insufficient to locate the requisite number of lead and copper sampling sites that are in compliance with the targeting criteria in this subrule, the supplier shall review the sources of information listed in paragraphs (i) to (iii) of this subdivision to identify a sufficient number of sampling sites. The provisions of 40 C.F.R. §141.42(d), December 5, 1994, are adopted by reference. The adopted material is available from the Superintendent of Documents at the address in R 325.10116(b) for a cost of \$47.00 at the time of adoption of these rules. The adopted material is available for inspection, or copies are available at no cost from the offices of the department at the address in R 325.10116(a). In addition, the supplier shall collect all of the following information, where

possible, in the course of its normal operations, for example, checking service line materials when reading water meters or performing maintenance activities:

(i) All plumbing codes, permits, and records in the files of the building department or departments that indicate the plumbing materials installed within publicly and privately owned structures connected to the distribution system.

(ii) All inspections and records of the distribution system that indicate the material composition of the service connections connecting a structure to the distribution system.

(iii) All existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, that indicates locations which may be particularly susceptible to high lead or copper concentrations.

(c) The sampling sites selected for a community water system's sampling pool (tier 1 sampling sites) shall consist of single-family structures to which either or both of the following provisions apply:

(i) The structures contain copper pipes soldered with lead and installed after 1982 or that contain lead pipes.

(ii) The structures are served by a lead service line. When multiple-family residences comprise not less than 20% of the structures served by a system, the supplier may include these types of structures in its sampling pool.

(d) For a community water system that has insufficient tier 1 sampling sites, the sampling pool shall be completed with tier 2 sampling sites, that consist of buildings, including multiple-family residences to which either or both of the following provisions apply:

(i) The structures contain copper pipes soldered with lead and installed after 1982 or that contain lead pipes.

(ii) The structures are served by a lead service line.

(e) For a community water system that has insufficient tier 1 and tier 2 sampling sites, the sampling pool shall be completed with tier 3 sampling sites, that consist of single-family structures containing copper pipes soldered with lead and installed before 1983. The supplier of a community water system with insufficient tier 1, tier 2, and tier 3 sampling sites shall complete its sampling pool with representative sites throughout the distribution system. For purposes of this subrule, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the system.

(f) The sampling sites selected for a nontransient, noncommunity water system (tier 1 sampling sites) shall consist of buildings to which either or both of the following provisions apply:

(i) The structures contain copper pipes soldered with lead and installed after 1982 or that contain lead pipes.

(ii) The structures are served by a lead service line.

(g) The supplier of a nontransient, noncommunity water system that has insufficient tier 1 sites shall complete its sampling pool with sampling sites containing copper pipes soldered with lead and installed before 1983. If additional sites are needed to complete the sampling pool, the supplier of a nontransient noncommunity water system shall use representative sites throughout the distribution system. For purposes of this subrule, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the system.

(h) If a distribution system contains lead service lines, the supplier shall draw 50% of the samples collected during each monitoring period from sites that contain lead pipes or copper pipes with lead solder and 50% of the samples from sites served by a lead service line. A supplier that cannot identify a sufficient number of sampling sites that are served by a lead service line shall collect first-draw tap samples from all of the sites identified as being served by lead service lines and shall complete its sampling pool in compliance with subdivisions (c) to (g) of this subrule.

(2) Sample collection methods provisions for lead and copper monitoring in tap water are as follows:



(a) All tap samples for lead and copper collected in compliance with this subrule, with the exception of lead service line samples collected under R 325.10604f(5)(c), and samples collected under subdivision (e) of this subrule, shall be first-draw samples.

(b) Each first-draw tap sample for lead and copper shall be 1 liter in volume and have stood motionless in the plumbing system of each sampling site for not less than 6 hours. First-draw samples from residential housing shall be collected from the cold-water kitchen tap or bathroom sink tap. First-draw samples from a nonresidential building shall be 1 liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. Non-first-draw samples collected instead of first-draw samples pursuant to subdivision (e) of this subrule shall be 1 liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. First-draw samples may be collected by the supplier or the supplier may allow residents to collect first-draw samples after instructing the residents about the sampling procedures specified in this subdivision. To avoid problems of residents handling nitric acid, acidification of first-draw samples may be done up to 14 days after the sample is collected. After acidification to resolubilize the metals, the sample shall stand in the original container for the time specified in the approved epa method before the sample can be analyzed. If a supplier allows residents to perform sampling, the supplier shall not challenge the accuracy of the sampling results based on alleged errors in sample collection.

(c) Each service line sample shall be 1 liter in volume and have stood motionless in the lead service line for not less than 6 hours. Lead service line samples shall be collected in 1 of the following 3 ways:

(i) At the tap after flushing the volume of water between the tap and the lead service line. The volume of water shall be calculated based on the interior diameter and length of the pipe between the tap and the lead service line.

(ii) Tapping directly into the lead service line.

(iii) If the sampling site is a building constructed as a single-family residence, allowing the water to run until there is a significant change in temperature which would be indicative of water that has been standing in the lead service line.

(d) A supplier shall collect each first-draw tap sample from the same sampling site from which it collected a previous sample. If, for any reason, the supplier cannot gain entry to a sampling site to collect a follow-up tap sample, the supplier may collect the follow-up tap sample from another sampling site in its sampling pool.

(e) The supplier of a nontransient noncommunity water system, or a community water system that meets the criteria of R 325.10410(8)(a) and (b), that does not have enough taps that can supply first-draw samples, as defined in R 325.10105(d), may apply to the department, in writing, to substitute non-first-draw samples. The supplier shall collect as many first-draw samples from appropriate taps as possible and identify sampling times and locations that would likely result in the longest standing time for the remaining sites. The department has the discretion to waive the requirement for prior department approval of non-first-draw sample sites selected by the supplier, either through department regulation or written notification to the supplier.

(3) Suppliers shall collect at least 1 sample during each monitoring period specified in subrule (4) of this rule from the number of sites listed in the standard monitoring column under this subrule. A supplier that conducts reduced monitoring under subrule (4)(d) of this rule shall collect at least 1 sample from the number of sites specified in the reduced monitoring column under this subrule during each monitoring period specified in subrule (4)(d) of this rule. The reduced monitoring sites shall be representative of the sites required for standard monitoring. The department may specify sampling locations when a system is conducting reduced monitoring.

System Size (Number of People Served)	Number of Sites (Standard Monitoring)	Number of Sites (Reduced Monitoring)
More than 100,000	100	50
10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
Fewer than 101	5	5

(4) Provisions for the timing of monitoring for lead and copper in tap water are as follows:

(a) The first 6-month monitoring period for small, medium-size, and large water systems shall begin on the following dates:

System Size (Number of People Served)	First 6-Month Monitoring Period Begins On
More than 50,000	January 1, 1992
3,301 to 50,000	July 1, 1992
Fewer than 3,301	July 1, 1993

All large water systems shall be monitored during 2 consecutive 6-month periods. All small and medium-size water systems shall be monitored during each 6-month monitoring period until either of the following occurs:

(i) The system exceeds the lead or copper action level and the supplier is therefore required to implement the corrosion control treatment under R 325.10604f(2), in which case the supplier shall continue monitoring under subdivision (b) of this subrule.

(ii) The system is in compliance with the lead and copper action levels during 2 consecutive 6-month monitoring periods, in which case the supplier may reduce monitoring under subdivision (d) of this subrule.

(b) Monitoring provisions after the installation of corrosion control and source water treatment are as follows:

(i) The supplier of a large water system that installs optimal corrosion control treatment under R 325.10604f(2)(d)(iii) shall monitor during 2 consecutive 6-month monitoring periods by the date specified in R 325.10604f(2)(d)(iv).

(ii) The supplier of a small or medium-size water system that installs optimal corrosion control treatment under R 325.10604f(2)(e)(v) shall monitor during 2 consecutive 6-month monitoring periods by the date specified in R 325.10604f(2)(e)(vi).

(iii) A supplier that installs source water treatment under R 325.10604f(4)(a)(ii) shall monitor during 2 consecutive 6-month monitoring periods by the date specified in R 325.10604f(4)(a)(iii).

(c) After the department specifies the values for water quality control parameters, the supplier shall monitor during each subsequent 6-month monitoring period, with the first monitoring period to begin on the date the department specifies the optimal values.

(d) Reduced monitoring provisions are as follows:

(i) The supplier of a small or medium-size water system that is in compliance with the lead and copper action levels during each of 2 consecutive 6-month monitoring periods may reduce the number of samples under subrule (3) of this rule and may reduce the frequency of sampling to once each year.

(ii) A supplier of a small, medium-size, or large water system that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the department during each of 2 consecutive 6-month monitoring periods may reduce the frequency of monitoring for lead and copper at the tap to once each year and reduce the number of lead and copper samples under subrule (3) of this rule if it receives written approval from the department.

(iii) The supplier of a small or medium-size water system that is in compliance with the lead and copper action levels during 3 consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every 3 years. A supplier of a small, medium-size, or large water system that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the department during 3 consecutive years of monitoring may reduce the frequency of monitoring for lead and copper at the tap from annually to once every 3 years if it receives written approval from the department.

(iv) A supplier who reduces the number and frequency of sampling shall collect these samples from representative sites included in the pool of targeted sampling sites identified in subrule (1) of this rule. A supplier who samples annually or less frequently shall conduct the lead and copper tap sampling during the month of June, July, August, or September unless the department has approved a different sampling period under subparagraph (A) of this paragraph, as follows:

(A) The department, at its discretion, may approve a different period for conducting the lead and copper tap sampling for suppliers collecting a reduced number of samples. The period shall be no longer than 4 consecutive months and shall represent a time of normal operation where the highest levels of lead are most likely to occur. For a nontransient noncommunity water system that does not operate during the months of June through September, and for which the period of normal operation where the highest levels of lead are most likely to occur is not known, the department shall designate a period that represents a time of normal operation for the system.

(B) Suppliers monitoring annually that have been collecting samples during the months of June through September and that received department approval to alter their sample collection period under subparagraph (A) of this paragraph, shall collect their next round of samples during a time period that ends no later than 21 months after the previous round of sampling. Suppliers monitoring triennially that have been collecting samples during the months of June through September, and receive department approval to alter the sampling collection period under subparagraph (A) of this paragraph, shall collect their next round of samples during a time period that ends no later than 45 months after the previous round of sampling. Subsequent rounds of sampling shall be collected annually or triennially, as required by this subrule. Suppliers of small water systems with waivers, granted under subrule (7) of this rule, that have been collecting samples during the months of June through September and that received department approval to alter their sample collection period under subparagraph (A) of this paragraph shall collect their next round of samples before the end of the 9-year cycle.

(v) A supplier that demonstrates for 2 consecutive 6-month monitoring periods that the tap water lead level computed under R 325.10604f(1)(c) is less than or equal to 0.005 mg/l and the tap water copper level computed under R 325.10604f(1)(c) is less than or equal to 0.65 mg/l may reduce the number of samples under subrule (3) of this rule and reduce the frequency of sampling to once every 3 calendar years.

(vi) The following provisions apply to supplies subject to reduced monitoring:

(A) The supplier of a small or medium-size water system subject to reduced monitoring that exceeds the lead or copper action level shall resume sampling under subdivision (c) of this subrule and shall collect the number of samples specified for the standard monitoring under subrule (3) of this rule. The supplier shall also conduct water quality parameter monitoring under R 325.10710b(4), (5), or (6), as appropriate, during the monitoring period in which the system exceeded the action level. The supplier may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in subrule (3) of this rule after it has completed

2 subsequent consecutive 6-month rounds of monitoring that meet the criteria of paragraph (i) of this subdivision or may resume triennial monitoring for lead and copper at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (iii) or (v) of this subdivision.

(B) If a system subject to the reduced monitoring frequency fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the department for more than 9 days in a 6-month period specified in R 325.10710b(6), the supplier shall conduct tap water sampling for lead and copper at the frequency specified in subdivision (c) of this subrule, collect the number of samples specified for standard monitoring under subrule (3) of this rule, and shall resume monitoring for water quality parameters within the distribution system under R325.10710b(6). The supplier may resume reduced monitoring for lead and copper at the tap and for water quality parameters within the distribution system under the following conditions:

(1) The supplier may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in subrule (3) of this rule after it has completed 2 subsequent 6-month rounds of monitoring that meet the criteria of paragraph (ii) of this subdivision and the supplier has received written approval from the department to resume reduced monitoring on an annual frequency.

(2) The supplier may resume triennial monitoring for lead and copper at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (iii) or (v) of this subdivision and the supplier has received written approval from the department to resume triennial monitoring.

(3) The supplier may reduce the number of water quality parameter tap water samples required under R 325.10710b(7)(a) and the frequency with which it collects the samples under R 325.10710b(7)(b). The supplier may not resume triennial monitoring for water quality parameters at the tap until it demonstrates, under the requirements of R 325.10710b(7)(b), that it has requalified for triennial monitoring.

(vii) For a system subject to a reduced monitoring frequency under subdivision (d) of this subrule, if the supplier either adds a new source of water or changes the water treatment, it shall inform the department in writing under R 325.10710d(1)(a)(iii). The department may require the supplier to resume sampling under subdivision (c) of this subrule and collect the number of samples specified for standard monitoring under subrule (3) of this rule or take other appropriate steps such as increased water quality parameter monitoring or reevaluation of its corrosion control treatment given the potentially different water quality considerations.

(5) The results of monitoring conducted in addition to the minimum requirements of this rule shall be considered in calculating the ninetieth percentile lead or copper level.

(6) A sample invalidated under this subrule does not count toward determining lead or copper ninetieth percentile levels under R 325.604f(1)(c) or toward meeting the minimum monitoring requirements of subrule (3) of this rule. All of the following provisions apply to invalidating samples:

(a) The department may invalidate a lead or copper tap water sample if at least 1 of the following conditions is met:

(i) The laboratory establishes that improper sample analysis caused erroneous results.

(ii) The department determines that the sample was taken from a site that did not meet the site selection criteria of this rule.

(iii) The sample container was damaged in transit.

(iv) There is substantial reason to believe that the sample was subject to tampering.

(b) The supplier shall report the results of all samples to the department and all supporting documentation for samples the supplier believes should be invalidated.

(c) To invalidate a sample under subdivision (a) of this subrule, the decision and the rationale for the decision shall be documented in writing. The department may not invalidate a sample solely on the grounds that a follow-up sample result is higher or lower than that of the original sample.

(d) The supplier shall collect replacement samples for the samples invalidated under this rule if, after the invalidation of 1 or more samples, the supplier has too few samples to meet the minimum requirements of subrule (3) of this rule. The replacement samples shall be taken as soon as possible, but not later than 20 days after the date the department invalidates the sample or by the end of the applicable monitoring period, whichever occurs later. Replacement samples taken after the end of the applicable monitoring period shall not also be used to meet the monitoring requirements of a subsequent monitoring period. The replacement samples shall be taken at the same locations as the invalidated samples or, if that is not possible, at locations other than those already used for sampling during the monitoring period.

(7) The supplier of a small water system that meets the criteria of this subrule may apply to the department to reduce the frequency of monitoring for lead and copper under this rule to once every 9 years, that is, a "full waiver", if it meets all of the materials criteria specified in subdivision (a) of this subrule and all of the monitoring criteria specified in subdivision (b) of this subrule. If a small water system meets the criteria in subdivisions (a) and (b) of this subrule only for lead, or only for copper, the supplier may apply to the department for a waiver to reduce the frequency of tap water monitoring to once every 9 years for that contaminant only, that is, a "partial waiver".

(a) The supplier shall demonstrate that its distribution system and service lines and all drinking water system plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, are free of lead-containing materials or copper-containing materials, or both, as those terms are defined in this subdivision, as follows:

(i) To qualify for a full waiver, or a waiver of the tap water monitoring requirements for lead, that is, a "lead waiver", the supplier shall provide certification and supporting documentation to the department that the system is free of all lead-containing materials and that the system complies with both of the provisions in this paragraph. Lead-free is defined in the international plumbing code, 2000 edition, which is adopted by reference in R 407.30701.

(A) The system does not contain plastic pipes that contain lead plasticizers or plastic service lines that contain lead plasticizers.

(B) The system is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass or bronze alloy fittings and fixtures, unless the fittings and fixtures meet the specifications of standards established pursuant to "Prohibition on Use of Lead Pipes, Solder, and Flux: Plumbing Fittings and Fixtures" 42 U.S.C. 300G-6(e), which are adopted by reference. The adopted material is available from the Superintendent of Documents at the address in R 325.10116(b) for a cost of \$56.00 at the time of adoption of these rules. The adopted material is available for inspection, or copies are available at no cost from the offices of the department at the address in R 325.10116(a).

(ii) To qualify for a full waiver, or a waiver of the tap water monitoring requirements for copper, that is, a "copper waiver", the supplier shall provide certification and supporting documentation to the department that the system does not contain copper pipes or copper service lines.

(b) The supplier shall have completed at least 1 6-month round of standard tap water monitoring for lead and copper at sites approved by the department and from the number of sites required by subrule (3) of this rule and demonstrate that the ninetieth percentile levels for all rounds of monitoring conducted since the system became free of all lead-containing or copper-containing materials, or both, as appropriate, meet the following criteria:

(i) To qualify for a full waiver or a lead waiver, the supplier shall demonstrate that the ninetieth percentile lead level does not exceed 0.005 mg/l.

(ii) To qualify for a full waiver or a copper waiver, the supplier shall demonstrate that the ninetieth percentile copper level does not exceed 0.65 mg/l.

(c) The department shall notify the system of its waiver determination, in writing setting forth the basis of its decision and any condition of the waiver. As a condition of the waiver, the department may require the supplier to perform specific activities, for example, limited monitoring, periodic outreach to customers to remind them to avoid installation of materials that might void the waiver, to avoid the risk of lead or copper concentration of concern in tap water. The supplier shall continue monitoring for lead and copper at the tap as required by subdivisions (a) through (d) of this subrule, as appropriate, until it receives written notification from the department that the waiver has been approved.

(d) Monitoring frequencies for supplies with waivers are as follows:

(i) For a system with a full waiver, the supplier shall conduct tap water monitoring for lead and copper under subrule (4)(d)(iv) of this rule at the reduced number of sampling sites identified in subrule (3) of this rule at least once every 9 years and provide the materials certification specified in subdivision (a) of this subrule for both lead and copper to the department along with the monitoring results.

(ii) For a system with a partial waiver, the supplier shall conduct tap water monitoring for the waived contaminant under subrule (4)(d)(iv) of this rule at the reduced number of sampling sites specified in subrule (3) of this rule at least once every 9 years and provide the materials certification specified in subdivision (a) of this subrule pertaining to the waived contaminant along with the monitoring results. The supplier also shall continue to monitor for the non-waived contaminant under requirements of subrule (4)(a) through (d) of this rule, as appropriate.

(iii) For a system with a full or partial waiver, if the supplier adds a new source of water or changes the water treatment, it shall notify the department, in writing, under R 325.10710d(a)(iii). The department has the authority to require the supplier to add or modify waiver conditions, for example, require recertification that the system is free of lead-containing or copper-containing materials, or both, require additional round or rounds of monitoring, if it considers the modifications are necessary to address treatment or source water changes at the system.

(iv) For a system with a full or partial waiver, if the supplier becomes aware that the system is no longer free of lead-containing or copper-containing materials, as appropriate, for example, as a result of new construction or repairs, the supplier shall notify the department, in writing, not later than 60 days after becoming aware of the change.

(e) If the supplier continues to satisfy the requirements of subdivision (d) of this subrule, the waiver will be renewed automatically, unless a condition listed in paragraphs (i) through (iii) of this subdivision occurs. For a system whose waiver has been revoked, the supplier may reapply for a waiver if it again meets the appropriate materials and monitoring criteria of subdivisions (a) and (b) of this subrule. The waiver is revoked if any of the following conditions exist:

(i) A system with a full waiver or a lead waiver no longer satisfies the materials criteria of subdivision (a)(i) of this subrule or has a ninetieth percentile lead level of more than 0.005 mg/l.

(ii) A system with a full waiver or a copper waiver no longer satisfies the materials criteria of subdivision (a)(ii) of this subrule or has a ninetieth percentile copper level of more than 0.65 mg/l.

(iii) The department notifies the supplier, in writing setting forth the basis of its decision, that the waiver has been revoked.

(f) A system whose full or partial waiver has been revoked by the department is subject to the corrosion control treatment and lead and copper tap water monitoring requirements, as follows:

(i) If the system exceeds the lead or copper action level, or both, the supplier shall implement corrosion control treatment under the deadlines specified in R 325.10604f(2)(e) and other applicable requirements of this part.

(ii) If the system meets both the lead and the copper action level, the supplier shall monitor for lead and copper at the tap not less frequently than once every 3 years using the reduced number of sample sites specified in subrule (3) of this rule.

(g) Small water system waivers approved by the department, in writing, before April 11, 2000, shall remain in effect if the supplier has demonstrated that the system is both free of lead-containing and copper-containing materials, as required by subdivision (a) of this subrule, and that the system's ninetieth percentile lead levels and ninetieth percentile copper levels meet the criteria of subdivision (b) of this subrule, and that the supplier continues to meet the waiver eligibility criteria of subdivision (e) of this subrule. The first round of tap water monitoring conducted pursuant to subdivision (d) of this subrule shall be completed not later than 9 years after the last time the supplier has monitored for lead and copper at the tap.

**R 325.10710b Monitoring requirements for supplies exceeding lead and copper action levels.**

Rule 710b. (1) The requirements of this rule are summarized in table 1 of this rule. Suppliers of the following systems shall monitor for water quality parameters in addition to lead and copper under this rule:

(a) Large water systems.

(b) Small and medium-size water systems that exceed the lead or copper action level.

(2) Sample collection methods provisions are as follows:

(a) Tap samples shall be representative of water quality throughout the distribution system taking all of the following factors into account:

(i) The number of persons served.

(ii) The different sources of water.

(iii) The different treatment methods employed by the supplier.

(iv) Seasonal variability.

Tap sampling under this subdivision is not required to be conducted at taps targeted for lead and copper sampling under R 325.10710a(1).

(b) Samples collected at the entry point or points to the distribution system shall be from locations that are representative of each source after treatment. If a system draws water from more than 1 source and the sources are combined before distribution, the supplier shall sample at an entry point to the distribution system during periods of normal operating conditions, for example, when water is representative of all sources being used.

(3) The number of samples a supplier is required to collect are as follows:

(a) A supplier shall collect 2 tap samples for applicable water quality parameters during each monitoring period specified in subrules (4) to (7) of this rule from the following number of sites:

<u>System Size</u> <u>(Number of People Served)</u>	<u>Number of Sites for</u> <u>Water Quality Parameters</u>
More than 100,000	25
10,001 to 100,000	10
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
Fewer than 101	1

(b) Except as provided in subrule (5)(c) of this rule, a supplier shall collect 2 samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in

subrule (4) of this rule. During each monitoring period specified in subrules (5) to (7) of this rule, a supplier shall collect 1 sample for each applicable water quality parameter at each entry point to the distribution system.

(4) The supplier of a large water system shall measure the applicable water quality parameters, at the locations specified in the following subdivisions at taps and at each entry point to the distribution system during each 6-month monitoring period specified in R 325.10710a(4)(a). The supplier of a small or medium-size water system shall measure the applicable water quality parameters at the locations specified in the following subdivisions during each 6-month monitoring period, as specified in R 325.10710a(4)(a), that the system exceeds the lead or copper action level:

(a) At taps, a sample for each of the following:

(i) pH.

(ii) Alkalinity.

(iii) Orthophosphate, when an inhibitor containing a phosphate compound is used.

(iv) Silica, when an inhibitor containing a silicate compound is used.

(v) Calcium.

(vi) Conductivity.

(vii) Water temperature.

(b) At each entry point to the distribution system, a sample for each of the applicable parameters that are listed in subdivision (a) of this subrule.

(5) The supplier of a large water system that installs optimal corrosion control treatment under R 325.10604f(2)(d)(iii) shall measure the water quality parameters at the locations and frequencies specified in this subrule during each 6-month monitoring period specified in R 325.10710a(4)(b)(i). The supplier of a small or medium-size water system who installs optimal corrosion control treatment shall measure the water quality parameters at the locations specified in the following subdivisions during each 6-month monitoring period, as specified in R 325.10710a(4)(b)(ii), that the system exceeds the lead or copper action level:

(a) At taps, 2 samples for each of the following:

(i) pH.

(ii) Alkalinity.

(iii) Orthophosphate, when an inhibitor containing a phosphate compound is used.

(iv) Silica, when an inhibitor containing a silicate compound is used.

(v) Calcium, when calcium carbonate stabilization is used as part of the corrosion control.

(b) Except as provided in subdivision (c) of this subrule, at each entry point to the distribution system, at least 1 sample no less frequently than every 2 weeks for each of the following:

(i) pH.

(ii) When alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity and a reading of the alkalinity concentration.

(iii) When a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used and a reading of the concentration of orthophosphate or silica, whichever is applicable.

(c) A supplier of a ground water system may limit entry point sampling described in subdivision (b) of this subrule to those entry points that are representative of water quality and treatment conditions throughout the system. If water from untreated ground water sources mixes with water from treated ground water sources, the supplier shall monitor for water quality parameters both at representative entry points receiving treatment and representative entry points receiving no treatment. Before the start of the monitoring under this subdivision, the supplier shall provide to the department written information identifying the selected entry points and documentation, including information on seasonal variability, sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.



(6) After the department specifies the values for applicable water quality control parameters reflecting optimal corrosion control treatment, the supplier of a large water system shall measure the applicable water quality parameters under subrule (5) of this rule and determine compliance with the requirement of R 325.10604f(3)(f) every 6 months with the first 6-month period to begin on the date the department specifies the optimal values. The supplier of a small or medium-size water system shall measure the applicable water quality parameters under subrule (5) of this rule during each 6-month period, as specified in this subrule that the system exceeds the lead or copper action level. For the small or medium-size water system subject to a reduced monitoring frequency pursuant to R 325.10710a(4)(d) when the action level is exceeded, the end of the applicable 6-month period under this subrule shall coincide with the end of the applicable monitoring period under R 325.10710a(4)(d). Compliance with department-designated optimal water quality parameter values shall be determined as specified under R 325.10604f(3)(f).

(7) Reduced monitoring provisions are as follows:

(a) A supplier that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment during each of 2 consecutive 6-month monitoring periods under subrule (6) of this rule shall continue monitoring applicable water quality parameters at the locations and frequencies specified in subrule (5) of this rule. The supplier may reduce the number of sites from which it monitors during each 6-month monitoring period to the following:

System Size (Number of People Served)	Reduced Number of Sites For Water Quality Parameters
More than 100,000	10
10,001 to 100,000	7
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
Fewer than 101	1

(b) Reduced monitoring frequency provisions are as follows:

(i) A supplier that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the department during 3 consecutive years of monitoring specified in this subdivision may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in subdivision (a) of this subrule from every 6 months to annually. A supplier that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the department during 3 consecutive years of annual monitoring specified in this subdivision may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in subdivision (a) of this subrule from annually to every 3 years.

(ii) A supplier may reduce the frequency with which it collects tap samples for applicable water quality parameters specified in subdivision (a) of this subrule to every 3 years if it demonstrates during 2 consecutive monitoring periods that its tap water lead level at the ninetieth percentile is less than or equal to the PQL for lead specified in 40 C.F.R. §141.89(a)(1)(ii), as adopted by reference in R 325.10605, that its tap water copper level at the ninetieth percentile is less than or equal to 0.65 mg/l for copper in R 325.10604f(3)(f), and that it also has maintained the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the department.

(c) A supplier that conducts sampling annually shall collect the samples evenly throughout the year to reflect seasonal variability.

(d) The supplier of a system subject to the reduced monitoring frequency who fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the department for more than 9 days in a 6-month period specified in R 325.10604f(3)(f) shall resume distribution system tap water sampling under the number and frequency requirements specified in subrule (6) of this rule. The supplier may resume annual monitoring for water quality parameters at the tap at the reduced number of sites specified in subdivision (a) of this subrule after it has completed 2 subsequent consecutive 6-month rounds of monitoring that meet the criteria of that subdivision or may resume triennial monitoring for water quality parameters at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either subdivision (b)(i) or (ii) of this subrule.

(8) Additional monitoring provisions are as follows:

(a) The results of monitoring conducted in addition to the minimum requirements of this rule shall be considered in determining the concentrations of water quality parameters.

(b) A supplier that fails to meet the lead action level based on tap samples collected under R 325.10710a shall offer to arrange for sampling the tap water of a customer who requests sampling. The supplier is not required to pay for collecting or analyzing the sample and is not required to collect and analyze the sample.

(9) Table 1 of this rule reads as follows:

Table 1 Summary of Monitoring Requirements for Water Quality Parameters – Lead, Copper, Corrosion Control<sup>1</sup>

Monitoring Period	Parameters <sup>2</sup>	Location	Frequency
Initial monitoring	pH, alkalinity, orthophosphate or silica <sup>3</sup> , calcium, conductivity, temperature	Taps and at entry point or points to distribution system	6 months
After installation of corrosion control	pH, alkalinity, orthophosphate or silica <sup>3</sup> , calcium <sup>4</sup>	Taps	Every 6 months
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual <sup>5</sup>	Entry point or points to distribution system <sup>6</sup>	No less frequently than every 2 weeks
After department specifies parameter values for optimal corrosion control	pH, alkalinity, orthophosphate or silica <sup>3</sup> , calcium <sup>4</sup>	Taps	Every 6 months
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual <sup>5</sup>	Entry point or points to Distribution system <sup>6</sup>	No less frequently than every 2 weeks
Reduced monitoring	PH, alkalinity, orthophosphate or silica <sup>3</sup> , calcium <sup>4</sup>	Taps	Every 6 months annually <sup>7</sup> or every 3 years <sup>8</sup> at a reduced number of sites

pH, alkalinity dosage rate and concentration (if alkalinity adjusted control), inhibitor dosage rate and inhibitor residual <sup>5</sup>	Entry point or points to distribution system <sup>6</sup>	No less frequently than every 2 weeks
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<sup>1</sup> Table is for illustrative purposes; consult the text of this part for precise regulatory requirements.

<sup>2</sup> Suppliers of small and medium-size water systems shall monitor for water quality parameters during monitoring periods in which the system exceeds the lead or copper action level.

<sup>3</sup> Orthophosphate shall be measured when an inhibitor containing a phosphate compound is used. Silica shall be measured when an inhibitor containing silicate compound is used.

<sup>4</sup> Calcium shall be measured when calcium carbonate stabilization is used as part of corrosion control.

<sup>5</sup> Inhibitor dosage rates and inhibitor residual concentrations (orthophosphate or silica) shall be measured when an inhibitor is used.

<sup>6</sup> Ground water suppliers may limit monitoring to representative locations throughout the system.

<sup>7</sup> Suppliers may reduce frequency of monitoring for water quality parameters at the tap from every 6 months to annually if they have maintained the range of values for water quality parameters reflecting optimal corrosion control during 3 consecutive years of monitoring.

<sup>8</sup> Suppliers may further reduce the frequency of monitoring for water quality parameters at the tap from annually to once every 3 years if they have maintained the range of values for water quality parameters reflecting optimal corrosion control during 3 consecutive years of annual monitoring. Suppliers may accelerate to triennial monitoring for water quality parameters at the tap if they have maintained ninetieth percentile lead levels less than or equal to 0.005 mg/l, ninetieth percentile copper levels less than or equal to 0.65 mg/l, and the range of water quality parameters designated by the department as representing optimal corrosion control during 2 consecutive 6-month monitoring periods.

### **R 325.10710c Monitoring requirements for lead and copper in source water.**

Rule 710c. (1) Sample location, collection methods, and number of samples required for lead and copper monitoring in source water are as follows:

(a) The supplier of a system that fails to meet the lead or copper action level based on tap samples collected under R325.10710a shall collect lead and copper source water samples under the following requirements regarding sample location, number of samples, and collection methods:

(i) Suppliers of ground water systems shall take a minimum of 1 sample at every entry point to the distribution system which is representative of each well after treatment, hereafter called a sampling point. The supplier shall take 1 sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

(ii) Suppliers of surface water systems shall take a minimum of 1 sample at every entry point to the distribution system after the application of treatment or in the distribution system at a point which is representative of each source after treatment, hereafter called a sampling point. The supplier shall take each sample at the same

sampling point unless conditions make another sampling point more representative of each source or treatment plant. For purposes of this paragraph, surface water systems include systems with a combination of surface and ground sources.

(iii) If a system draws water from more than 1 source and the sources are combined before distribution, the supplier shall sample at an entry point to the distribution system during periods of normal operating conditions, that is, when water is representative of all sources being used.

(b) If the results of sampling, taken to determine compliance with R 325.1064f(4)(b)(iv), indicate an exceedance of the maximum permissible source water levels established by the department, then the department may require that 1 additional sample be collected as soon as possible after the initial sample was taken, but not more than 2 weeks later, at the same sampling point. If a department-required confirmation sample is taken for lead or copper, then the results of the initial and confirmation samples shall be averaged to determine compliance with the department-specified maximum permissible levels. A sample value below the detection limit shall be considered to be zero. A value above the detection limit, but below the PQL, shall either be considered as the measured value or be considered 1/2 of the PQL.

(2) The supplier of a system that exceeds the lead or copper action level at the tap shall collect 1 source water sample from each entry point to the distribution system within 6 months after the action level is exceeded.

(3) A supplier that installs source water treatment under R 325.10604f(4)(a)(ii) shall collect an additional source water sample from each entry point to the distribution system during 2 consecutive 6-month monitoring periods by the deadline specified in R 325.10604f(4)(a)(iii).

(4) The following provisions apply to the monitoring frequency after the department specifies maximum permissible source water levels or determines that source water treatment is not needed:

(a) A supplier shall monitor to determine compliance with R 325.10604f(4)(b)(iv) at the frequency specified in the following paragraphs where the department specifies maximum permissible source water levels or determines that the supplier is not required to install source water treatment:

(i) A supplier of only groundwater shall collect samples once during the 3-year compliance period, as defined in R 325.10103, that is in effect when the applicable department determination under this subdivision is made. The supplier shall collect samples once during each subsequent compliance period.

(ii) A supplier of surface water or a combination of surface water and groundwater shall collect samples once during each year. The first annual monitoring period shall begin on the date on which the applicable department determination is made under this subdivision.

(b) A supplier is not required to conduct source water sampling for lead or copper if the system is in compliance with the action level for the specific contaminant in tap water samples during the entire source water sampling period applicable to the system under subdivision (a)(i) and (ii) of this subrule.

(5) Reduced monitoring frequency provisions are as follows:

(a) A supplier of only groundwater may reduce the monitoring frequency for lead and copper in source water to once during each 9-year compliance cycle, as defined in R 325.10103 if the system meets 1 of the following criteria:

(i) The supplier demonstrates that finished drinking water entering the distribution system has been maintained below the department specified maximum permissible lead and copper concentrations as required in R 325.10604f(4)(b)(iv) during not less than 3 consecutive compliance periods under subrule (4)(a) of this rule.

(ii) The department has determined that source water treatment is not needed and the supplier demonstrates that, during not less than 3 consecutive compliance periods in which sampling was conducted under subrule (4)(a) of this rule, the concentration of lead in source water was less than or equal to 0.005 mg/l and the concentration of copper in source water was less than or equal to 0.65 mg/l.

(b) The supplier of surface water or a combination of surface water and groundwater may reduce the monitoring frequency in subrule (4)(a) of this rule to once during each 9-year compliance cycle, as defined in R 325.10103 if the system meets either of the following criteria:

(i) The supplier demonstrates that finished drinking water entering the distribution system has been maintained below the department specified maximum permissible lead and copper concentrations as required in R 325.10604f(4)(b)(iv) for not less than 3 consecutive years.

(ii) The department has determined that source water treatment is not needed and the supplier demonstrates that, during not less than 3 consecutive years, the concentration of lead in source water was less than or equal to 0.005 mg/l and the concentration of copper in source water was less than or equal to 0.65 mg/l.

(c) A system that uses a new source of water is not eligible for reduced monitoring for lead or copper until concentrations in samples collected from the new source during 3 consecutive monitoring periods are below the department-specified maximum permissible lead and copper concentrations as required in R 325.10604f(4)(a)(iv).

**R 325.10710d Reporting requirements for lead, copper, and corrosion control.**

Rule 710d. A supplier shall report all of the following information to the department under this rule:

(a) Reporting provisions for tap water monitoring for lead and copper and for water quality parameter monitoring are as follows:

(i) Except as provided in subparagraph (G) of this paragraph, a supplier shall report the information specified in this paragraph for all tap water samples specified in R 325.10710a and for all water quality parameter samples specified in R 325.10710b within the first 10 days after the end of each applicable monitoring period specified in R 325.10710a and R 325.10710b, for example, every 6-months, annually, every 3 years, or every 9 years:

(A) The results of all tap samples for lead and copper, including the location of each site and the criteria in R 325.10710a(1)(c), (d), (e), (f), or (g) used to select the site for the system's sampling pool.

(B) Documentation for each tap water lead or copper sample for which the supplier requests invalidation pursuant to R 325.10710a(6)(b).

(C) The ninetieth percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period, calculated in compliance with the provisions of R 325.10604f(1)(c)(i), unless the department calculates the system's ninetieth percentile lead and copper levels under subdivision (h) of this subrule.

(D) With the exception of initial tap sampling conducted under R 325.10710a(4)(a), a supplier shall designate sites not sampled during previous monitoring periods and include an explanation of why sampling sites have changed.

(E) The results of all tap samples for pH and, where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected under R 325.10710b(b) to (e).

(F) The results of all samples collected at the entry point or points to the distribution system for applicable water quality parameters under R 325.10710b(b) to (e).

(G) A supplier shall report the results of all water quality parameter samples collected under R 325.10710b(5) through (8) during each 6-month monitoring period specified in R 325.10710b(6) within the first 10 days following the end of the monitoring period, unless the department has specified a more frequent reporting requirement.

(ii) For a nontransient noncommunity water system, or a community water system meeting the criteria of R 325.10410(8)(a) and (b), that does not have enough taps that can provide first-draw samples, the supplier shall do either of the following as appropriate:

(A) Provide written documentation to the department identifying standing times and locations for enough non-first-draw samples to make up its sampling pool under R 325.10710a(2)(e) by the start of the first applicable monitoring period under R 325.10710a(4) that commences after April 11, 2000, unless the department has waived prior department approval of non-first-draw sample sites selected by the supplier pursuant to R 325.10710a(2)(e).

(B) If the department has waived prior approval of non-first-draw sample sites selected by the supplier, identify, in writing, each site that did not meet the 6-hour minimum standing time and the length of standing time for that particular substitute sample collected pursuant to R 325.10710a(2)(e) and include this information with the lead and copper tap sample results submitted pursuant to subdivision (a)(i) of this subrule.

(iii) Not later than 60 days after the addition of a new source or a change in water treatment, unless the department requires earlier notification, a supplier considered to have optimized corrosion control under R 325.10604f(2)(b), a system subject to reduced monitoring pursuant to R 325.10710a(4)(d), or a system subject to a monitoring waiver pursuant to R 325.10710a(7) shall send written documentation to the department describing the change. If prior department approval of the treatment change or new source is not required, suppliers are encouraged to provide the notification to the department beforehand to minimize the risk the treatment change or new source will adversely affect optimal corrosion control.

(iv) The supplier of a small water system applying for a monitoring waiver under R 325.10710a(7), or subject to a waiver granted pursuant to R 325.10710a(7)(c), shall provide all of the following information to the department, in writing, by the specified deadline:

(A) By the start of the first applicable monitoring period in R 325.10710a(4), the supplier of a small water system applying for a monitoring waiver shall provide the documentation required to demonstrate that it meets the waiver criteria of R 325.10710a(7)(a) and (b).

(B) Not later than 9 years after the monitoring previously conducted pursuant to R 325.10710a(7)(b) or R 325.10710a(7)(d)(i), the supplier of a small water system desiring to maintain its monitoring waiver shall provide the information required by R 325.10710a(7)(d)(i) and (ii).

(C) Not later than 60 days after the supplier becomes aware that the system is no longer free of lead-containing or copper-containing material, or both, as appropriate, the supplier of a small water system with a monitoring waiver shall provide written notification to the department, setting forth the circumstances resulting in the lead-containing or copper-containing materials, or both, being introduced into the system and what corrective action, if any, the supplier plans to remove these materials.

(v) For each ground water system that limits water quality parameter monitoring to a subset of entry points under R 325.10710b(5)(c), the supplier shall provide, by the commencement of the monitoring, written correspondence to the department that identifies the selected entry points and includes information sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.

(b) Source water monitoring provisions are as follows:

(i) A supplier shall report the sampling results for all source water samples collected under R 325.10710c within the first 10 days after the end of each source water monitoring period, for example, annually, per compliance period, or per compliance cycle, specified in R 325.10710c.

(ii) With the exception of the first round of source water sampling conducted under R 325.10710c(2), a supplier shall specify sites that were not sampled during previous monitoring periods and include an explanation of why the sampling points have changed.

(c) A supplier shall report the following corrosion control treatment information to the department by the applicable dates specified in R 325.10604f(2):

(i) For a supplier that has already optimized corrosion control, the information required in R 325.10604f(2)(b)(ii) or (iii).

- (ii) For a supplier required to optimize corrosion control, the supplier's recommendation regarding optimal corrosion control treatment under R 325.10604f(3)(a).
- (iii) For a supplier that is required to evaluate the effectiveness of corrosion control treatments under R 325.10604f(3)(c), the information required by R 325.10604f(3)(c).
- (iv) For a supplier required to install optimal corrosion control designated by the department under R 325.10604f(3)(d), documentation certifying that the supplier has completed installing the optimal corrosion control.
- (d) A supplier shall provide the following source water treatment information to the department by the applicable dates specified in R 325.10604f(4):
  - (i) If required under R 325.10604f(4)(b)(i), the supplier's recommendation regarding source water treatment.
  - (ii) For a supplier required to install source water treatment under R 325.10604f(4)(b)(ii), documentation certifying that the supplier has completed installing the treatment designated by the department within 24 months after the department designated the treatment.
- (e) A supplier shall report all of the following lead service line replacement information to the department to demonstrate compliance with the requirements of R 325.10604f(5):
  - (i) Within 12 months after a system exceeds the lead action level in sampling referred to in R 325.10604f(5)(a), the supplier shall submit a written report to the department that demonstrates the supplier has conducted a materials evaluation, including the evaluation specified in R 325.10710a(1), to identify the initial number of lead service lines in its distribution system and shall provide the department with the supplier's schedule for replacing annually not less than 7% of the initial number of lead service lines in its distribution system.
  - (ii) Within 12 months after a system exceeds the lead action level in sampling referred to in R 325.10604f(5)(a), and every 12 months thereafter, the supplier shall submit a written report to the department that demonstrates the supplier has complied with either of the following requirements:
    - (A) Replaced, in the previous 12 months, not less than 7% of the initial lead service lines, or a greater number of lines specified by the department under R 325.10604f (4), in its distribution system.
    - (B) Conducted sampling demonstrating that the lead concentration in all service line samples from an individual line or lines, taken under R 325.10710a(2)(c), is less than or equal to 0.015 mg/l. In those cases, the total number of lines that were replaced or that meet the criteria specified in R 325.10604f(5)(c), or both, shall equal not less than 7% of the initial number of lead lines identified under subdivision (a) of this rule or the percentage specified by the department under R 325.10604f (4).
  - (iii) The annual documentation submitted to the department under paragraph (ii) of this subdivision, which shall contain all of the following information:
    - (A) The number of lead service lines scheduled to be replaced during the previous year of the system's replacement schedule.
    - (B) The number and location of each lead service line replaced during the previous year of the system's replacement schedule.
    - (C) If measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling.
  - (iv) At the request of the department, a supplier that collects lead service line samples following partial lead service line replacement required by R 325.10604f(5) shall report the results to the department as specified in R 325.10734(1). Suppliers shall also report additional information as specified by the department under R 325.11505(2) to verify that all partial lead service line replacement activities have taken place.
- (f) A supplier shall provide the following public education reporting information to the department:

- (i) If a system is subject to the public education requirements in R 325.10410, the supplier shall, within 10 days after the end of each period in which the supplier is required to perform public education tasks under R 325.10410(2), send written documentation to the department that contains both of the following:
  - (A) A demonstration that the supplier has delivered the public education materials that meet the content requirements in R 325.10410(1) and the delivery requirements in R 325.10410(2) and (3).
  - (B) A list of all the newspapers, radio stations, television stations, and facilities and organizations to which the supplier delivered public education materials during the period in which the supplier was required to perform public education tasks.
- (ii) Unless required by the department, a supplier that previously has submitted the information required by paragraph (i)(B) of this subdivision need not resubmit the information required by paragraph (i)(B) of this subdivision, if there have been no changes in the distribution list and the supplier certifies that the public education materials were distributed to the same list submitted previously.
- (g) A supplier that collects sampling data in addition to that required by this part shall report the results to the department within the first 10 days following the end of the applicable monitoring period specified in R 325.10710a, R 325.10710b, and R 325.10710c during which the samples are collected.
- (h) A supplier is not required to report the ninetieth percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period, as required by subrule (1)(a)(i)(D) of this rule if both of the following provisions are satisfied:
  - (i) The department has previously notified the supplier that it will calculate the system's ninetieth percentile lead and copper concentrations, based on the lead and copper tap results submitted pursuant to paragraph (ii)(A) of this subdivision, and has specified a date before the end of the applicable monitoring period by which the supplier shall provide the results of lead and copper tap water samples.
  - (ii) The supplier has provided the following information to the department by the date specified in paragraph (i) of this subdivision:
    - (A) The results of all tap samples for lead and copper including the location of each site and the criteria under R 325.10710a(1)(c), (d), (e), (f), or (g), under which the site was selected for the system's sampling pool, pursuant to subdivision (a)(i) of this subrule.
    - (B) An identification of sampling sites utilized during the current monitoring period that were not sampled during previous monitoring periods, and an explanation why sampling sites have changed.
  - (iii) The department has provided the results of the ninetieth percentile lead and copper calculations, in writing, to the supplier before the end of the monitoring period.

### **R 325.10716 Collection and analysis of samples for VOCs.**

- Rule 716. (1) Beginning with the initial compliance period, suppliers of water of community and nontransient, noncommunity public water supplies shall collect samples and cause analyses to be made according to the provisions of this rule for volatile organic chemicals to determine compliance with the state drinking water standards listed in R 325.10604b. Each supplier shall monitor at the time designated by the department within each compliance period. The department may increase required monitoring where necessary to detect variations within a water system.
- (2) For transient, noncommunity and type III public water supplies, the department may require samples to be collected and analyzed at prescribed frequencies for organic chemicals.
  - (3) Suppliers of groundwater systems shall take a minimum of 1 sample at every entry point to the distribution system that is representative of each well after treatment. Each sample shall be taken at the same sampling point unless conditions make another sampling point more representative of each source, treatment plant, or within the distribution system.



(4) Suppliers of surface water systems or combined surface water and groundwater systems shall take a minimum of 1 sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment. Each sample shall be taken at the same sampling point unless conditions make another sampling point more representative of each source, treatment plant, or within the distribution system.

(5) If the system draws water from more than 1 source and the sources are combined before distribution, the system shall be sampled at an entry point to the distribution system during periods of normal operating conditions when water that is representative of all sources is being used.

(6) Suppliers of each community water system and nontransient, noncommunity water system shall take 4 consecutive quarterly samples for each contaminant, except for vinyl chloride, that is listed in R 325.10604b during each compliance period, beginning in the initial compliance period. Suppliers that use grandfathered samples and that did not detect any VOCs listed in R 325.10604b, table 6.2, shall, beginning with the initial compliance period, monitor annually under subrule (7) of this rule.

(7) If the initial monitoring has been completed by December 31, 1992, and the supplier did not detect any contaminant listed in R 325.10604b, then each groundwater and surface water supplier shall take 1 sample annually beginning with the initial compliance period.

(8) After a supplier has performed annual sampling for not less than 3 years, the department may allow a groundwater supplier that has not previously detected any contaminant that is listed in R 325.10604b to take 1 sample during each compliance period.

(9) Suppliers of each community water system and nontransient noncommunity groundwater system that do not detect, at or above 0.0005 milligrams per liter, a contaminant listed in R 325.10604b may apply to the department for a waiver from portions of the requirements of subrules (6) and (7) of this rule after completing the initial monitoring. A waiver shall be effective for not more than 6 years. The department may also issue waivers to small systems for the initial round of 1,2,4 trichlorobenzene monitoring.

(10) The following factors will be evaluated to determine if a waiver will be granted:

(a) Knowledge of previous use, including transport, storage, or disposal, of the contaminant within the watershed or zone of influence of the system. A supplier is not eligible for waiver if it is determined that previous use of the contaminant within the watershed or zone of influence has occurred.

(b) If previous use of the contaminant is unknown or the contaminant has been used previously, then all of the following factors shall be used to determine whether a waiver is granted:

(i) Previous analytical results.

(ii) The proximity of the system to a potential point or non-point source of contamination. Point sources include spills and leaks of chemicals at or near a water treatment facility or at manufacturing, distribution, or storage facilities or from hazardous and municipal waste landfills and other waste-handling or treatment facilities.

(iii) The environmental persistence and transport of the contaminants.

(iv) The number of persons who are served by the public water system and the proximity of a smaller system to a larger system.

(v) How well the water source is protected against contamination, such as whether it is a surface water or groundwater system. Groundwater supplies shall consider factors such as depth of the well, the type of soil, and wellhead protection. Surface water supplies shall consider watershed protection.

(11) As a condition of a waiver, a groundwater supplier shall take 1 sample at each sampling point during the time the waiver is effective and update its vulnerability assessment considering the factors listed in subrule (10) of this rule. If the department does not reconfirm that the system is nonvulnerable based on this vulnerability assessment within 3 years of the initial determination, then the waiver is invalidated and the supplier is required to sample annually as specified in subrule (7) of this rule.

(12) Suppliers of each community water system and nontransient noncommunity surface water system that do not detect a contaminant listed in R 325.10604b may apply to the department for a waiver from the requirements of subrule (7) of this rule after completing the initial monitoring. Suppliers of Systems that do not detect a contaminant listed in R 325.10604b shall be determined by the department to be nonvulnerable based on a vulnerability assessment, considering the factors listed in subrule (10) of this rule, during each compliance period. Each supplier that receives a waiver shall sample at the frequency specified by the department.

(13) If a contaminant, other than vinyl chloride, listed in R 325.10604b is detected at a level more than 0.0005 milligrams per liter in any sample, then all of the following provisions apply:

(a) The supplier shall monitor quarterly at each sampling point that resulted in a detection.

(b) The department may decrease the quarterly monitoring requirement specified in subdivision (a) of this subrule if it has determined that the system is reliably and consistently below the MCL. A groundwater supplier shall take not less than 2 quarterly samples and a surface water supplier shall take not less than 4 quarterly samples for this determination.

(c) If the department determines that the system is reliably and consistently below the MCL, the department may allow the supplier to monitor annually. Suppliers that monitor annually shall monitor during the quarter or quarters that previously yielded the highest analytical result.

(d) Suppliers that conduct 3 consecutive annual samples and do not detect a contaminant may apply to the department for a waiver as specified in subrule (9) of this rule.

(e) Groundwater suppliers that detect 1 or more of the following 2-carbon organic compounds shall monitor quarterly for vinyl chloride:

(i) Trichloroethylene.

(ii) Tetrachloroethylene.

(iii) 1,2-dichloroethane.

(iv) 1,1,1-trichloroethane.

(v) cis-1,2-dichloroethylene.

(vi) trans-1,2-dichloroethylene.

(vii) 1,1-dichloroethylene. A vinyl chloride sample shall be taken at each sampling point at which 1 or more of the 2-carbon organic compounds were detected. If the results of the first analysis do not detect vinyl chloride, the department may reduce the quarterly monitoring frequency of vinyl chloride monitoring to 1 sample during each compliance period. Surface water suppliers shall monitor for vinyl chloride as specified by the department.

(14) Suppliers that violate the requirements of R 325.10604b shall monitor quarterly. After not less than 4 consecutive quarterly samples that show the system is in compliance with R 325.10604b and the department determines the system is reliably and consistently below the MCL, the supplier may monitor at the frequency and time specified in subrule (13)(c) of this rule.

(15) The department may require a confirmation sample for positive or negative results. If a confirmation sample is required by the department, the result shall be averaged with the first sampling result and the average shall be used for the compliance determination as specified by R 325.10604b. The department may delete results of obvious sampling errors from the calculation.

(16) The department may reduce the total number of samples a supplier shall analyze by allowing the use of compositing when the population served by the system is more than 3,300 persons. Composite samples from not more than 5 sampling points within a single water system are allowed if the detection limit of the method used for analysis is less than 1/5 of the MCL. Compositing of samples shall be done in the laboratory and analyzed within 14 days of sample collection. All of the following provisions apply to compositing:

- (a) If the concentration in the composite sample is more than or equal to 0.0005 milligrams per liter for any contaminant listed in R325.10604b, then a supplier shall take a follow-up sample within 14 days from each sampling point included in the composite and shall analyze the sample.
- (b) If duplicates of the original sample taken from each sampling point used in the composite are available, the supplier may use these instead of resampling. A supplier shall analyze the duplicate and shall report the results to the department within 14 days of collection.
- (c) The method for compositing samples specified in the provisions of 40 C.F.R. part 141, paragraph 141.24(f)(14)(iv) and (v), May 4, 2000, is adopted by reference. The adopted material is available from the superintendent of documents at the address in R 325.10116(b) for a cost of \$47.00 at the time of adoption of these rules. The adopted material is available for inspection, or copies are available at no cost from the offices of the department at the address in R 325.10116(a).

**R 325.10717b Special monitoring.**

Rule 717b. (1) Unregulated contaminant monitoring requirements are contained in 40 C.F.R. §141.40. The department adopts by reference 40 C.F.R. §141.40 (January 11, 2001). The adopted material is available from the superintendent of documents at the address in R 325.10116(b) for a cost of \$47.00 at the time of adoption of these rules. The adopted material is available for inspection, or copies are available at no cost from the offices of the department at the address in R 325.10116(a).

(2) All of the following provisions apply to sodium monitoring:

- (a) A supplier of water for a community water system shall collect and analyze 1 sample per plant at the entry point to the distribution system to determine sodium concentration levels. Samples shall be collected and analyzed annually for a system that utilizes surface water sources in whole or in part and not less than once every 3 years for a system that utilizes solely ground water sources. The minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may be considered 1 treatment plant for determining the minimum number of samples.
- (b) The supplier of water shall report to the department the results of the analyses for sodium as required in R 325.10734(1). If the department requires more than annual sampling, then the supplier shall report the average sodium concentration as required in R 325.10734(1) after taking the last sample used for the annual average.
- (c) The supplier shall notify the local health department of the sodium levels within 3 months in writing. The supplier shall send a copy of the written notice to the state within 10 days of its issuance. The supplier is not required to send written notice to the local health department when the department provides the notice instead of the supplier.
- (3) An analysis for a contaminant or parameter listed in this rule shall be conducted only by laboratories certified to conduct that analysis under part 27 of these rules or approved by the United States EPA.

**R 325.10734 Required reporting to the department.**

Rule 734. (1) Unless otherwise specified in this part, a supplier of water shall report to the department the results of a measurement or analysis required by this part within the first 10 days of the month following the month in which the results are received, or within the first 10 days following the end of the required monitoring period, whichever is sooner.

(2) Unless otherwise specified in these rules, a supplier of water shall report, to the department, within 48 hours, failing to comply with a state drinking water standard or other requirement under these rules, including failing to comply with a monitoring requirement under this part.

- (3) A supplier of water shall not be required to report analytical results to the department in cases where the department laboratory performs the analysis and reports the results to the department.
- (4) A public water system, upon discovering that a waterborne disease outbreak that is potentially attributable to that water system has occurred, shall report that occurrence to the department as soon as possible, but not later than the end of the next business day.

**R 325.10736 Rescinded.**

**R 325.10738 Rescinded.**

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**ADMINISTRATIVE RULES**

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**ORR # 2001-023**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**DRINKING WATER AND RADIOLOGICAL PROTECTION DIVISION**

**SUPPLYING WATER TO THE PUBLIC**

Filed with the Secretary of State on May 22, 2002

These rules take effect 7 days after filing with the Secretary of State

(By authority conferred on the department of environmental quality by sections 5, 7, 14, and 19 of 1976 PA 399, MCL 325.1005, 325.1007, 325.1014, and 325.1019, and Executive Reorganization Order No. 1996-1, MCL 330.3101)

R 325.10103, R 325.10105, R 325.10106, R 325.10107, R 325.10108, R 325.10109, and R 325.10112 of the Michigan Administrative Code are amended, and R 325.10116 is added to the Code, as follows:

**PART 1. GENERAL PROVISIONS**

**R 325.10103 Definitions; C.**

Rule 103. As used in these rules:

- (a) "C" in "CT calculation" means the residual disinfectant concentration measured in milligrams per liter in a representative sample of water.
- (b) "Casing" means a durable pipe that is placed in a well to prevent the soil from caving in and to seal off surface drainage or undesirable water, gases, contaminants, or other fluids and prevent them from entering the well and the aquifer supplying the well.
- (c) "Casing vent" means an outlet at the upper terminal of a well casing which provides atmospheric pressure in the well and which allows the escape of gases when present.
- (d) "Certificate" means a document that is issued by the department to a person who meets the qualification requirements for operating a waterworks system or a portion of the waterworks system.
- (e) "Certified operator" means an operator who holds a certificate.
- (f) "Community supply" or "community water supply" or "community water system" means a public water supply that provides year-round service to not fewer than 15 living units or that regularly provides year-round service to not fewer than 25 residents.
- (g) "Complete treatment system" means a treatment system that employs disinfection, coagulation, sedimentation, and filtration units that function collectively to effect control over water quality characteristics to produce a finished water that meets the requirements of the state drinking water standards.
- (h) "Compliance cycle" means the 9-year calendar year cycle during which public water systems are required to monitor. Each compliance cycle consists of 3 3-year compliance periods. The first calendar year cycle begins

January 1, 1993, and ends December 31, 2001; the second begins January 1, 2002, and ends December 31, 2010; the third begins January 1, 2011, and ends December 31, 2019.

(i) "Compliance period" means a 3-year calendar year period within a compliance cycle. Each compliance cycle has 3 3-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993, to December 31, 1995; the second from January 1, 1996, to December 31, 1998; the third from January 1, 1999, to December 31, 2001.

(j) "Confluent growth" means a continuous bacterial growth that covers the entire filtration area of a membrane filter, or portion of a filtration area, in which bacterial colonies are not discrete.

(k) "Construction" means the erection, installation, or alteration of a waterworks system, or any portion of a waterworks system, that affects any of the following:

(i) Flow.

(ii) Capacity.

(iii) System service area.

(iv) Source.

(v) Treatment.

(vi) Reliability.

(l) "Contested cases" means matters that are within the definition of a contested case as set forth by section 3(3) of 1969 PA 306, MCL 24.203(3), and matters of issue that involve any of the following which are issued by the director, the department, or the division pursuant to the act and these rules:

(i) Orders.

(ii) Exemptions.

(iii) Variances.

(iv) Stipulations.

(v) Consent agreements.

(vi) Permits.

(vii) Licenses.

(viii) Certificates.

(m) "Contested case hearing" means a hearing that is initiated by the department or a person under chapters 4, 5, and 6 of 1969 PA 306, MCL 24.271 to 24.306.

(n) "Contaminant" means a physical, chemical, biological, or radiological substance or matter in water.

(o) "Contingency plan" means a plan for use by a supplier of water in the event of an emergency.

(p) "Corrosion inhibitor" means a substance that is capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

(q) "Cross connection" means a connection or arrangement of piping or appurtenances through which a backflow could occur.

(r) "CT calculation" means the product of residual disinfectant concentration (C) in milligrams per liter determined at or before the first customer and the corresponding disinfectant contact time (T) in minutes; C\*T is calculated at rated capacity. The total CT shall be the sum of individual CTs of each disinfectant sequence.

(s) "Customer service connection" means the pipe between a water main and customer site piping or building plumbing system.

(t) "Customer site piping" means an underground piping system owned or controlled by the customer that conveys water from the customer service connection to building plumbing systems and other points of use on lands owned or controlled by the customer. Customer site piping does not include any system that incorporates treatment to protect public health.

**R 325.10105 Definitions; F to L.**

Rule 105. As used in these rules:

- (a) "Federal act" means the safe drinking water act of 1974, 42 U.S.C. S300f et seq. and the provisions of 40 C.F.R. part 35, §35.600 to §35.630; 40 C.F.R. part 141; and 40 C.F.R. part 142 promulgated by EPA (1999) under the federal act.
- (b) "Finished water" means water that is ready for distribution to the customers or users of a public water supply.
- (c) "Firm capacity," as applied to wells, pumping stations, or units of treatment systems, means the production capability of each respective part of the waterworks system with the largest well, pump, or treatment unit out of service.
- (d) "First draw sample" means a 1-liter sample of tap water which has been standing in plumbing pipes for not less than 6 hours and which is collected without flushing the tap.
- (e) "Gravity storage tank" means an elevated or ground level finished water storage reservoir that, during normal use, operates under atmospheric pressure.
- (f) "Ground water" or "groundwater" means the water in the zone of saturation in which all of the pore spaces of the subsurface material are filled with water.
- (g) "Ground water under the direct influence of surface water" means any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*, or significant and relatively rapid changes in water characteristics such as turbidity, temperature, conductivity or pH that closely correlate to climatological or surface water conditions.
- (h) "Grout" means neat cement, concrete, or other sealing material which is approved by the department and which is used to seal a well casing in a well.
- (i) "Imminent hazard" means that in the judgment of the director there is a violation, or a condition that may cause a violation, of the state drinking water standards at a public water supply requiring immediate action to prevent endangering the health of people.
- (j) "Initial compliance period" means January 1993 to December 1995. For a system that has less than 150 service connections, the initial compliance period is January 1996 to December 1998 for contaminants listed in part 6 of these rules that have an effective date of January 17, 1994.
- (k) "Large water supply" or "large water system," for the purpose of lead and copper control, means a public water supply that serves more than 50,000 persons.
- (l) "Lead service line" means a service line which is made of lead and which connects the water main to the building inlet and any lead pigtail, gooseneck, or other fitting that is connected to the lead line.
- (m) "License" means the license that is issued by the department to a water hauler, or for a water hauling tank, pursuant to section 18 of the act.
- (n) "Limited treatment system" means a treatment system, including, but not limited to, disinfection, fluoridation, iron removal, ion exchange treatment, phosphate application, or filtration other than complete treatment.
- (o) "Living unit" means a house, apartment, or other domicile occupied or intended to be occupied on a day-to-day basis by an individual, family group, or equivalent.

**R 325.10106 Definitions; M to O.**

Rule 106. As used in these rules:

- (a) "Maximum TTHM potential" means the maximum concentration of total trihalomethanes produced in a given water containing a disinfectant residual after 7 days at a temperature of 25 degrees Centigrade or above.

- (b) "MCL" means the maximum permissible level of a contaminant in water that is delivered to any user of a public water supply.
- (c) "MDL" means method detection limit for analytical work done to determine compliance with the act.
- (d) "Medium-size water system" or "medium-size water supply," for the purpose of lead and copper control, means a public water supply that serves more than 3,300 persons and fewer than or equal to 50,000 persons.
- (e) "Monitoring requirement" means a schedule, frequency, and location for the sampling and analysis of water that is required by the provisions of part 7 of these rules to determine whether a public water supply is in compliance with the state drinking water standards.
- (f) "Near the first service connection" means at 1 of the 20% of all service connections in the entire system that are nearest the water supply treatment facility, as measured by water transport time within the distribution system.
- (g) "Noncommunity supply" or "noncommunity water supply" or "noncommunity water system" means a public water supply that is not a community supply, but that has not fewer than 15 service connections or that serves not fewer than 25 individuals on an average daily basis for not less than 60 days per year.
- (h) "Nontransient noncommunity water supply" or "nontransient noncommunity water system" or "NTNC" means a noncommunity supply that serves not fewer than 25 of the same individuals on an average daily basis over 6 months per year. This definition includes public water supplies in places of employment, schools, and day-care centers.
- (i) "NTU" means nephelometric turbidity unit.
- (j) "One hundred-year drought elevation" means the minimum projected water surface elevation that would occur at a location once in a period of 100 years.
- (k) "One hundred-year flood elevation" means the maximum projected water surface elevation that would occur at a location once in a period of 100 years.
- (l) "Operating shift" means that period of time during which operator decisions that affect public health are necessary for proper operation of the waterworks system.
- (m) "Operator" means an individual who operates a waterworks system or a portion of a waterworks system.
- (n) "Operator in charge" means a certified operator who is designated by the owner of a public water supply as the responsible individual in overall charge of a waterworks system, or portion of a waterworks system, who makes decisions regarding the daily operational activities of the system that will directly impact the quality or quantity of drinking water.
- (o) "Optimal corrosion control treatment," for the purpose of lead and copper control, means the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while ensuring that the treatment does not cause the public water supply to be in violation of any national primary drinking water regulations.

### **R 325.10107 Definitions; P, R.**

Rule 107. As used in these rules:

- (a) "Permit" means a public water supply construction permit that is issued to a supplier of water by the department under the provisions of section 4 of the act.
- (b) "Person" means an individual, partnership, copartnership, cooperative, firm, company, public or private association or corporation, political subdivision, agency of the state, agency of the federal government, trust, estate, joint structure company, or any other legal entity, or their legal representative, agent, or assignee.
- (c) "Pitless adapter" means a device or assembly of parts which permits water to pass through the wall of a well casing or extension of a well casing and which provides access to the well and to the parts of the system within the well in a manner that prevents the entrance of contaminants into the well and the water produced.



- (d) "Plans and specifications" means drawings, data, and a true description or representation of an entire waterworks system or parts of the system as it exists or is to be constructed, and a statement of how a waterworks system shall be operated.
- (e) "Political subdivision" means a city, village, township, charter township, county, district, authority, or portion or combination of any of the entities specified in this subdivision.
- (f) "PQL" means the practical quantitation levels. The PQL is the lowest concentration that can be reliably achieved by well-operated laboratories within specified limits of precision and accuracy during routine laboratory operating conditions.
- (g) "Production well" means a well that has been approved for use for a public water supply in accordance with the provisions of part 8 of these rules.
- (h) "Public hearing" means a hearing which is conducted by the director of the department on matters relating to the functions and responsibilities of the division and which seeks public input relevant to such functions and responsibilities.
- (i) "Public water supply" or "public water system" means a waterworks system that provides water for drinking or household purposes to persons other than the supplier of the water, and does not include either of the following:
- (i) A waterworks system that supplies water to only 1 living unit.
  - (ii) A waterworks system that consists solely of customer site piping.
- (j) "Pumping water level" means the distance measured from an established datum at or above ground level to the water surface in a well being pumped at a known rate for a known period of time.
- (k) "Rated treatment capacity" is one or any combination of the following capacities when water treatment is practiced:
- (i) Rated capacity from an approved surface water supply, ground water supply under the direct influence of surface water, or complete treatment system as contained in R 325.11006.
  - (ii) Firm capacity from an approved ground water supply where firm capacity means the production capability of each respective component of the waterworks system with the largest well, pump, or treatment unit out of service.
  - (iii) Available capacity obtained under contract and capable of delivery from another approved public water supply.
- (l) "Raw water" means water that is obtained from a source by a public water supply before a supplier of water provides any treatment or distributes the water to its customers.
- (m) "Regional administrator" means the EPA region V administrator.
- (n) "Regulated VOCs" means a group of volatile organic chemicals for which state drinking water standards have been promulgated, but does not include total trihalomethanes.
- (o) "Removed from service" means physically disconnected from the waterworks system in a manner that would prevent the inadvertent use of the well and would require specific authorization from the supplier of water to reconnect.
- (p) "Repeat sample" means a sample that is collected and analyzed in response to a previous coliform-positive sample.
- (q) "Resident" means an individual who owns or occupies a living unit.
- (r) "Routine sample" means a water sample that is collected and analyzed to meet the monitoring requirements for total coliform, as outlined in the written sampling plan.

**R 325.10108 Definitions; S.**

Rule 108. As used in these rules:

- (a) "Sanitary survey" means an evaluation, including an on-site review of a waterworks system or a portion thereof, for existing or potential health hazards, including sampling, design, operation, and maintenance, for the purpose of determining the ability of the public water supply to produce, treat, and distribute adequate quantities of water meeting state drinking water standards.
- (b) "Service connection" means a direct connection from a distribution water main to a living unit or other site to provide water for drinking or household purposes.
- (c) "Service line sample" means a 1-liter sample of water that has been standing for not less than 6 hours in a service line.
- (d) "Shift operator" means a certified operator, other than the operator in charge, who is in charge of an operating shift of a waterworks system.
- (e) "Single-family structure," for the purpose of lead and copper control, means a building which is constructed as a single-family residence and which is currently used as either a residence or a place of business.
- (f) "Small water supply" or "small water system," for the purpose of lead and copper control, means a public water supply that serves fewer than 3,301 persons.
- (g) "SOC" means synthetic organic chemical.
- (h) "Source" means the point of origin of raw water or means treated water that is purchased or obtained by a public water supply, by a water hauler, or by a person who provides bottled water.
- (i) "State drinking water standards" means quality standards setting limits for contaminant levels or establishing treatment techniques to meet standards necessary to protect the public health.
- (j) "Static water level" means the distance measured from an established datum at or above ground level to the water surface in a well which is not being pumped, which is not under the influence of pumping, and which is not flowing under artesian pressure.
- (k) "Suction line" means a pipe or line that is connected to the inlet side of a pump or pumping equipment.
- (l) "Supplier of water" or "supplier" means a person who owns or operates a public water supply, and includes a water hauler.
- (m) "Surface water" means water that rests or flows on the surface of the ground.
- (n) "System with a single-service connection" means a public water supply that supplies drinking water to consumers through a single-service line.

**R 325.10109 Definitions; T to Y.**

Rule 109. As used in these rules:

- (a) "Test well" means a well that is drilled on a site that has not been approved for use as a production well in accordance with the provisions of part 8 of these rules.
- (b) "Too numerous to count" means that the total number of bacterial colonies is more than 200 on a 47-millimeter diameter membrane filter.
- (c) "Total trihalomethanes" or "TTHM" means the sum of the concentration in milligrams per liter, rounded to 2 significant figures, of all of the following:
  - (i) The trihalomethane compounds.
  - (ii) Trichloromethane (chloroform).
  - (iii) Dibromochloromethane.
  - (iv) Bromodichloromethane.
  - (v) Tribromomethane (bromoform).
- (d) "Transient noncommunity water supply" or "transient noncommunity water system" means a noncommunity supply that does not meet the definition of nontransient noncommunity water supply in R 325.10106(h).

- (e) "Treatment system" means a facility or structure and associated appurtenances installed for the purpose of treating drinking water before delivery to a distribution system.
- (f) "Treatment technique" means a minimum treatment requirement or a necessary methodology or technology that is employed by a supplier of water for the control of the chemical, physical, biological, or radiological characteristics of the public water supply.
- (g) "Trihalomethane" or "THM" means 1 of the family of organic compounds named as derivatives of methane, wherein 3 of the 4 hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.
- (h) "Unregulated contaminants" means a group of contaminants for which state drinking water standards have not been promulgated, but for which monitoring requirements apply.
- (i) "Variance" means an order, with appropriate conditions and compliance schedules and requirements, which is issued by the director to a supplier of water and which permits a public water supply to be in noncompliance with a state drinking water standard, including a specified treatment technique.
- (j) "VOC" means volatile organic chemical.
- (k) "Water hauler" means a person engaged in bulk vehicular transportation of water to other than the water hauler's own household which is intended for use or used for drinking or household purposes. Excluded from this definition are those persons providing water solely for employee use.
- (l) "Water transportation tank" means a tank that is associated with an over-the-road vehicle that is used for the bulk transport of drinking water.
- (m) "Waterworks system" or "system" means a system of pipes and structures through which water is obtained and distributed, including, but not limited to: wells and well structures, intakes and cribs, pumping stations, treatment plants, storage tanks, pipelines and appurtenances, or a combination of the items specified in this subdivision, actually used or intended for use for the purpose of furnishing water for drinking or household purposes.
- (n) "Year-round service" means the ability of a supplier of water to provide drinking water on a continuous basis to a living unit or facility.

### **R 325.10112 Adoption by reference.**

Rule 112. The department adopts by reference the publication entitled "Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure," NCRP Report 22, 1963, as referred to in parts 1 and 6 of these rules. The adopted material is available from the National Council on Radiation Protection at the address in R 325.10116(c) for a cost of \$20.00 at the time of adoption of these rules. The adopted material is available for inspection, or copies are available at no cost from the offices of the department at the address in R 325.10116(a).

### **R 325.10116 Addresses.**

Rule 116. The following are addresses and contact information of the department and other organizations referred to in these rules:

- (a) Department of Environmental Quality, Drinking Water And Radiological Protection Division, 525 West Allegan Street, Post Office Box 30630, Lansing, MI 48909-8130, Telephone 517-241-1300. Internet address: <http://www.deq.state.mi.us>.
- (b) Superintendent of Documents, United States Government Printing Office, Post Office Box 371954, Pittsburgh, PA 15250-7954, Telephone 202-512-1800. Internet address: [http://www.access.gpo.gov/su\\_docs](http://www.access.gpo.gov/su_docs).
- (c) National Council On Radiation Protection, 7910 Woodmont Avenue, Suite 800, Bethesda, Maryland 20814, Telephone 301-657-2652. Internet address: <http://www.ncrp.com>.

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**ADMINISTRATIVE RULES**

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**ORR # 2001-024**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**DRINKING WATER AND RADIOLOGICAL PROTECTION DIVISION**

**SUPPLYING WATER TO THE PUBLIC**

Filed with the Secretary of State on May 22, 2002

This rule takes effect 7 days after filing with the Secretary of State

(By authority conferred on the department of environmental quality by sections 5, 7, 14, and 19 of 1976 PA 399, MCL 325.1005, 325.1007, 325.1014, and 325.1019, and Executive Reorganization Order No. 1996-1, MCL 330.3101)

R 325.11506 of the Michigan Administrative Code is amended as follows:

**PART 15. OPERATION REPORTS AND RECORDKEEPING**

**R 325.11506 Retention of records.**

Rule 1506. (1) A supplier of water of a community water system or a noncommunity water system shall retain on its premises, or at a convenient location near its premises, all of the following records:

- (a) Records of bacteriological analyses required under part 7 of these rules shall be kept for not less than 5 years.
  - (b) Records of chemical analyses required under part 7 of these rules shall be kept for not less than 10 years unless otherwise indicated in this rule.
  - (c) Records of turbidity analyses required under part 7 of these rules shall be kept for not less than 5 years.
  - (d) Records of radiological analyses required under part 7 of these rules shall be kept for not less than 10 years.
  - (e) Original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, department determinations, and any other information required under R 325.10604f(2) to (5), R 325.10410, R 325.10710a, R 325.10710b, R 325.10710c, or R 325.10710d, shall be retained for not less than 12 years.
- (2) Actual laboratory reports for chemical, bacteriological, turbidity, and radiological analyses shall be kept; however, the analyses data may be transferred to tabular summaries if all of the following information is included:
- (a) The date, place, and time of sampling and the name of the person who collected the sample.
  - (b) Identification of the sample as a routine distribution system sample, check sample, raw or treated water sample, or other special purpose sample.
  - (c) The date of the analysis.
  - (d) The laboratory and the person who was responsible for performing the analysis.
  - (e) The analytical technique or method used.
  - (f) The results of the analysis.

- (3) Records of action taken by the supplier to correct violations of the state drinking water standards shall be kept for not less than 3 years after the last action taken with respect to the particular violation.
- (4) Copies of any written reports, summaries, or communications related to sanitary surveys of the public water supply and conducted by the supplier of the public water system itself, by a private consultant, by the division, or by a local, state, or federal agency shall be kept for not less than 10 years after completion of the sanitary survey involved.
- (5) Records that involve a variance or an exemption granted to a public water supply shall be kept for not less than 5 years after the expiration date of the variance or exemption.
- (6) Records that involve any emergency or public notification regarding a public water supply shall be kept for not less than 3 years after the emergency or public notification.

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**ADMINISTRATIVE RULES**

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**ORR # 2001-040**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**AIR QUALITY DIVISION**

**AIR POLLUTION CONTROL**

Filed with the Secretary of State on May 20, 2002

These rules take effect 7 days after filing with the Secretary of State

(By authority conferred on the director of the department of environmental quality by sections 5503 and 5512 of 1994 PA 451, MCL 324.5503 and 324.5512, and Executive Reorganization Order No. 1995-18, MCL 324.99903)

R 336.1915 and R 336.1916 are added to the Michigan Administrative Code as follows:

**PART 9. EMISSION LIMITATIONS AND PROHIBITIONS--MISCELLANEOUS**

**R 336.1915 Enforcement discretion in instances of excess emissions resulting from malfunction, start-up, or shutdown.**

Rule 915. (1) In determining whether the department will pursue enforcement against a person, the department shall consider evidence that the emission violations resulted from a malfunction, start-up, or shutdown.

(2) If the department determines that the emission violations resulted from a malfunction, start-up, or shutdown, then the department may use enforcement discretion when resolving the emission violations based upon subrules (3) and (4) of this rule, as applicable.

(3) A person may submit evidence to the department for its consideration in determining that the emission violations resulted from a malfunction. The evidence shall demonstrate all of the following, as applicable:

(a) The excess emissions were a result of a sudden and unavoidable breakdown of process or control equipment, beyond the reasonable control of the person.

(b) The air pollution control equipment, process equipment, and processes were maintained and operated in a manner consistent with good practice for minimizing emissions, to the maximum extent practicable.

(c) The excess emissions caused by a bypass (an intentional diversion of control equipment) were unavoidable to prevent loss of life, personal injury, or severe property damage.

(d) Repairs were made in an expeditious fashion when the person knew or should have known that applicable emission limitations were being exceeded. To the extent practicable, off-shift labor and overtime shall have been utilized to ensure that the repairs were made expeditiously.

(e) The amount and duration of excess emissions, including any bypass, were minimized to the maximum extent practicable during periods of the emissions.

- (f) All reasonably possible steps were taken to minimize the impact of the excess emissions on ambient air quality.
- (g) The excess emissions resulting from the malfunction were not part of a recurring pattern indicative of inadequate design, operation, or maintenance.
- (h) The malfunction was an infrequent event and was not reasonably preventable.
- (i) All emission monitoring systems were kept in operation if at all possible.
- (j) The person responsible for operating the source of air contaminants has a malfunction abatement plan, consistent with the requirements set forth in R 336.1911(2) and with both of the following provisions:
  - (i) Any malfunction abatement plan developed in accordance with R 336.1911(2) shall be maintained onsite and available for inspection, upon request, by the department for the life of the emission unit or units. The department may require that the person responsible for the malfunction abatement plan make revisions to the plan. The person shall revise the malfunction abatement plan within 45 days after a request by the department. The revised malfunction abatement plan shall be developed in accordance with R 336.1911(2).
  - (ii) If the malfunction abatement plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, then the person shall revise the malfunction abatement plan within 45 days after the event occurs. The revised malfunction abatement plan shall be developed in accordance with R 336.1911(2).
- (k) The excess emissions presenting an imminent threat to human health, safety, or the environment were reported to the department as soon as possible. Unless otherwise specified in the facility's permit, other excess emissions were reported as provided in R 336.1912. If requested by the department, a person shall submit a full written report that includes the known causes, the corrective actions taken, and the preventive measures to be taken to minimize or eliminate the chance of recurrence.
- (l) The actions during the period of excess emissions were documented by contemporaneous operating logs or other relevant evidence as provided by R 336.1912.
- (m) Any information submitted to the department under this subrule shall be properly certified in accordance with the provisions of R 336.1912.
- (4) A person may submit evidence to the department for its consideration in determining that the emission violations resulted from a start-up or shutdown. The evidence shall be based upon subrules (3)(b), (c), (e), (f), (i), (k), (l), and (m) of this rule; subdivisions (a), (b), (c) of this subrule; and R 336.1912, as applicable.
  - (a) The periods of excess emissions that occurred during start-up or shutdown were short and infrequent and could not have been prevented through careful planning and design.
  - (b) The excess emissions that occurred during start-up or shutdown were not part of a recurring pattern indicative of inadequate design, operation, or maintenance.
  - (c) The person responsible for operating the source of air contaminants has a preventative maintenance plan, consistent with the requirements set forth in R 336.1911(2)(a).
- (5) For an emission unit or units subject to standards and limitations promulgated pursuant to section 111 or 112 of the clean air act, the start-up, shutdown, or malfunction provisions of the applicable requirements within section 111 or 112 shall apply.
- (6) Nothing in this rule shall be construed to limit the authority of the department to seek injunctive relief or to enforce the provisions of the act and the regulations promulgated under the act.

**R 336.1916 Affirmative defense for excess emissions during start-up or shutdown.**

Rule 916. (1) The person operating a source with emissions in excess of an applicable emission limitation due to start-up or shutdown may claim an affirmative defense to an enforcement proceeding, excluding a judicial action

seeking injunctive relief, if the person has complied with the reporting requirements of R 336.1912 and has demonstrated all of the following:

- (a) The periods of excess emissions that occurred during start-up or shutdown were short and infrequent and could not have been prevented through careful planning and design.
  - (b) The excess emissions that occurred during start-up or shutdown were not part of a recurring pattern indicative of inadequate design, operation, or maintenance.
  - (c) The excess emissions caused by a bypass (an intentional diversion of control equipment) were unavoidable to prevent loss of life, personal injury, or severe property damage.
  - (d) The facility was operated at all times in a manner consistent with good practice for minimizing emissions.
  - (e) The frequency and duration of operating in start-up or shutdown mode were minimized to the maximum extent practicable.
  - (f) All reasonably possible steps were taken to minimize the impact of the excess emissions on ambient air quality.
  - (g) All emission monitoring systems were kept in operation if at all possible.
  - (h) The actions during the period of excess emissions were documented by contemporaneous operating logs or other relevant evidence as provided by R 336.1912.
  - (i) Excess emissions presenting an imminent threat to human health, safety, or the environment were reported to the department as soon as possible. Unless otherwise specified in the facility's permit, other excess emissions were reported as provided in R 336.1912. If requested by the department, a person shall submit a full written report that includes the known causes, the corrective actions taken, and the preventive measures to be taken to minimize or eliminate the chance of recurrence.
  - (j) Any information submitted to the department under this subrule shall be properly certified in accordance with the provisions of R 336.1912.
- (2) This affirmative defense does not apply when a single emission unit, or multiple emission units at a stationary source, causes an exceedance of the national ambient air quality standards or any applicable prevention of significant deterioration increment.
- (3) If the proximate cause of the excess emissions which occurred during routine start-up or shutdown periods was due to a malfunction, then, absent any intervening acts or superseding causes, the instances shall be treated as malfunctions in accordance with R 336.1915.
- (4) Nothing in this rule shall be construed to limit the authority of the department to seek injunctive relief or to enforce the provisions of the act and the regulations promulgated under the act.



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**ADMINISTRATIVE RULES**

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**ORR # 2001-059**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**AIR QUALITY DIVISION**

**AIR POLLUTION CONTROL**

Filed with the Secretary of State on May 20, 2002

These rules take effect 7 days after filing with the Secretary of State

(By authority conferred on the director of the department of environmental quality by sections 5503 and 5512 of 1994 PA 451, MCL 324.5503 and 324.5512, and Executive Reorganization Order No. 1995-18, MCL 324.99903)

R 336.1102, R 336.1104, R 336.1105, R 336.1107, R 336.1108, R 336.1113, R 336.1118, and R 336.1120 of the Michigan Administrative Code are amended as follows:

**PART 1. GENERAL PROVISIONS**

**R 336.1102 Definitions; B.**

Rule 102. As used in these rules:

(a) "Best available control technology for toxics" or "T-BACT" means the maximum degree of emission reduction which the department determines is reasonably achievable for each process that emits toxic air contaminants, taking into account energy, environmental, and economic impacts and other costs.

(b) "Best available information" means data which serves as the basis for a risk assessment. Such information may be taken from the scientific literature or the integrated risk information system database maintained by the United States environmental protection agency or from other databases, as appropriate. The term includes other pertinent studies or reports containing data which the department finds to be of adequate quality for use in the risk assessment.

(c) "Black coating" means a coating which meets both of the following criteria:

(i) Maximum lightness: 23 units.

(ii) Saturation: less than 2.8, where saturation equals the square root of  $A^2 + B^2$ .

These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, maximum lightness is 33 units.

(d) "Blending tank," as it pertains to R 336.1631, means any vessel in which organic resin and solvent or other materials are added to produce a product blend.

(e) "Breakthrough," with respect to a carbon adsorption system, means a condition in which the carbon bed is saturated with a volatile organic compound to the extent that the control efficiency of the system is substantially reduced.

(f) "Business machine" means a device that uses electronic or mechanical methods to process information, perform calculations, print or copy information or convert sound into electrical impulses for transmission, including devices listed in standard industrial classification numbers 3572, 3573, 3574, 3579, and 3661 and photocopy machines, a subcategory of standard industrial classification number 3861.

**R 336.1104 Definitions; D.**

Rule 104. As used in these rules:

- (a) "Dampened-off coke oven" means a coke oven that is isolated from the coke oven gas collector main by closing every damper valve on all standpipes of that oven during the decarbonization period.
- (b) "Decarbonization period," with respect to coke ovens, means the time for combusting carbon formed at the oven roof and in the standpipe assembly. The decarbonization period commences when a charging-hole lid or lids or a standpipe lid or lids are removed or opened near the end of the coking cycle and ends with the initiation of the next charging period.
- (c) "Delivery vessel" means any tank truck, tank-equipped trailer, railroad tank car, or any similar vessel equipped with a storage tank used for the transport of a volatile organic compound from sources of supply to any stationary vessel.
- (d) "Demolition waste material" means waste building materials that result from demolition operations on houses and commercial and industrial buildings.
- (e) "Department" means the director of the department of environmental quality or his or her designee.
- (f) "Difficult-to-monitor component" means a component that can only be monitored by elevating the monitoring personnel more than 6 feet above a support surface.
- (g) "Dry organic resin" means the organic resin solids from which all liquids have been removed, as deliverable for sale or use.
- (h) "Dispensing facility" means a location where gasoline is transferred to a motor vehicle tank from a stationary vessel.

**R 336.1105 Definitions; E.**

Rule 105. As used in these rules:

- (a) "Electrostatic prep coat" means a coating that is applied to a plastic part solely to provide conductivity for the subsequent application of a prime, a topcoat, or other coating through the use of electrostatic application methods. An electrostatic prep coat is clearly identified as an electrostatic prep coat on its accompanying material safety data sheet.
- (b) "Emission unit" means any part of a stationary source that emits or has the potential to emit an air contaminant. Examples of emission units include the following:
  - (i) A fossil fuel-fired, steam-generating unit.
  - (ii) A topcoat painting line.
  - (iii) A solid waste incinerator.
  - (iv) A clinker cooler at a portland cement plant.
  - (v) A process unit at a chemical plant.
- (c) "Equipment utilized in the manufacturing of pharmaceutical products" means equipment associated with the storage, transfer, or manufacturing of pharmaceutical products, including raw materials and intermediate products, by chemical synthesis. This definition does not include equipment associated with the manufacturing of pharmaceutical products by fermentation or extraction, the formulation or packaging of bulk pharmaceuticals, or the processing of waste resulting from pharmaceutical synthesis.

- (d) "Equivalent method," with respect to source sampling, means a method or set of procedures for obtaining source samples that has been demonstrated to the department's satisfaction to have a consistent and quantitatively known relationship to an applicable reference test method.
- (e) "Excess air" means any air in excess of the amount of air required for complete combustion of a material as determined by using reference test method 3 of appendix A to the department's rules.
- (f) "Excess emissions" means emissions of an air contaminant in excess of any applicable emission limitation.
- (g) "External floating roof stationary vessel" means an open top stationary vessel equipped with a cover or roof which rests upon and is supported by the liquid being contained and which has a closure seal or seals to reduce the space between the cover or roof edge and the vessel wall.
- (h) "Extreme environmental conditions" means any of the following:
  - (i) Outdoor weather.
  - (ii) Temperatures consistently above 95 degrees Celsius (203 degrees Fahrenheit).
  - (iii) Detergents.
  - (iv) Abrasive and scouring agents.
  - (v) Solvents.
  - (vi) Corrosive atmospheres.
  - (vii) Other similar harsh conditions.
- (i) "Extreme performance coating" means a coating which is designed to protect a coated part from extreme environmental conditions and which is applied to a part that, in its use as a finished product, is intended to be subjected to extreme environmental conditions.

**R 336.1107 Definitions; G.**

Rule 107. As used in these rules:

- (a) "Gasoline" means any petroleum distillate which has a Reid vapor pressure equal to or greater than 4.0 psia and which is used for automotive fuel.
- (b) "Geographical site" means contiguous land ownership by 1 landowner. A public right of way, such as a road, railroad, and watercourse, through part of the site, is not considered to break the continuity. Where transmission and fuel delivery rights-of-way or a strip of land that serves no other purpose than as a transportation or materials handling link connects 2 or more otherwise separate geographical sites, the connected sites shall be considered separate geographical sites.
- (c) "Good engineering practice design" means, with respect to stack heights, the height necessary to ensure that emissions from the stack result in acceptable concentrations of air contaminants in the immediate vicinity of the stationary source as a result of atmospheric downwash, eddies, and wakes which may be created by the stationary source itself, nearby structures, or nearby terrain obstacles and shall not exceed the greatest of the following limits:
  - (i) Two hundred and thirteen feet (65 meters).
  - (ii) Two and one-half times the height of the structure or nearby structure for those stacks for which construction or modification commenced on or before January 12, 1979, if the owner or operator produces evidence that this relationship was actually relied upon in designing the stack to ensure protection against downwash.
  - (iii) The sum of the height of the structure or nearby structure plus 1.5 times the lesser of the height or width of the structure or nearby structure for those stacks for which construction or modification commenced after January 12, 1979.
  - (iv) Such height as an owner or operator of a stationary source demonstrates, to the satisfaction of the department, is necessary through the use of field studies or fluid models after notice and opportunity for public hearing.

(d) "Gloss reducer" means a coating that is applied to a plastic part solely to reduce the shine of the part. A gloss reducer shall not be applied at a thickness of more than 0.5 mils of coating solids.

(e) "Graphic arts line" means an operation or series of operations in which printing (the formation of words), designs, or pictures on a substrate by means of partial coverage of the substrate are employed. A graphic arts line may also employ 1 or more coating operations in which a uniform layer of coating is applied either across the entire width of the substrate or across only certain portions of the substrate.

### **R 336.1108 Definitions; H.**

Rule 108. As used in these rules:

(a) "Hardboard" means a panel manufactured primarily from interfelted ligno-cellulosic fibers which are consolidated under heat and pressure in a hot press.

(b) "Hardwood plywood" means plywood whose surface layer is a veneer of hardwood.

(c) "Heavy liquid" means a liquid which is less than 10% evaporated at 150 degrees Centigrade as determined by ASTM method d-86. ASTM d-86 is herein adopted by reference in these rules. A copy may be inspected at the Lansing office of the air quality division of the department of environmental quality. A copy may be obtained from the Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, at a cost of \$40.00. A copy may also be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428, at a cost of \$40.00.

(d) "High bake coating" means a coating which is designed to cure only at temperatures of more than 90 degrees Celsius (194 degrees Fahrenheit).

(e) "High-speed dispersion mill" means a mixer that has 1 or more blades which rotate at high speed to disperse coating solids.

### **R 336.1113 Definitions; M.**

Rule 113. As used in these rules:

(a) "Major nonattainment air contaminant" means a nonattainment air contaminant for which the potential to emit is significant for a proposed major offset source or for which there is a significant net emissions increase for a proposed major offset modification.

(b) "Major offset modification" means the addition of a process or process equipment or a physical change in, or change in the method of operation of, a process or process equipment at a major offset source which results in a significant net emissions increase of any air contaminant regulated under the clean air act.

(c) "Major offset source" means either of the following:

(i) A stationary source which has a potential to emit of 100 or more tons per year of any air contaminant regulated under the clean air act.

(ii) A particular change at a minor offset source which results in an increase in the potential to emit of 100 or more tons per year of any air contaminant regulated under the clean air act.

(d) "Malfunction" means any sudden, infrequent and not reasonably preventable failure of a source, process, process equipment, or air pollution control equipment to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(e) "Manufacturing location" means a place where a person is engaged in the making of goods or wares, including the generation of electricity in the processing of material or primarily in the disposal or treatment of solid or liquid waste. For the purpose of assessing a surveillance fee, "manufacturing location" includes all such places, whether publicly or privately owned and contained within 1 geographical site, except places owned and operated by the state government. A power plant, as defined in table 42 of R 336.1401, constitutes a separate manufacturing location when used to supply steam or energy to more than 1 other manufacturing or commercial

location. In any case, a power plant that has a capacity of more than 500,000 pounds of steam per hour is considered a separate manufacturing location. For a large industrial complex or other unusual cases, the department may determine that the complex constitutes more than 1 manufacturing location, based on such factors as separate corporate operating divisions, units, or sections.

- (f) "Market testing and market development" means the limited or general distribution of a product to the consumer to gather information concerning the demand for the product.
- (g) "Material handling equipment," as referenced in table 31, means a device, contrivance, or equipment used to bag, blend, convey, crush, grind, load, mill, mix, shed, store, transfer, or unload a physical substance.
- (h) "Material recovery equipment" means any equipment utilized in the transport and recovery of styrene monomer and other impurities from other products and by-products in the manufacture of polystyrene resin by continuous process, including the styrene devolatilizer unit and styrene recovery unit.
- (i) "Minor offset source" means a stationary source which has a potential to emit of less than 100 tons per year for each air contaminant regulated under the clean air act.
- (j) "Modify" means making a physical change in, or change in the method of operation of, existing process or process equipment which increases the amount of any air contaminant emitted into the outer air which is not already allowed to be emitted under the conditions of a permit or order or which results in the emission of any toxic air contaminant into the outer air not previously emitted. An increase in the hours of operation or an increase in the production rate up to the maximum capacity of the process or process equipment shall not be considered to be a change in the method of operation unless the process or process equipment is subject to enforceable permit conditions or enforceable orders which limit the production rate or the hours of operation, or both, to a level below the proposed increase.
- (k) "Motor vehicle" means any self-propelled vehicle registered for, or requiring registration for, use on the highway.

### **R 336.1118 Definitions; R.**

Rule 118. As used in these rules:

- (a) "Reactor" means a vessel which may be jacketed to permit temperature control and which is designed to contain materials during chemical reaction.
- (b) "Reconstruction" means the replacement of components of an existing facility so that the fixed capital cost of the new components is more than 50% of the fixed capital cost that would be required to construct a comparable entirely new emission unit and so that it is technologically and economically feasible to meet the applicable requirement.  
 "Fixed capital cost," as used in this subdivision, means the capital needed to provide all of the depreciable components.
- (c) "Red coating" means a coating which meets all of the following criteria:
  - (i) Yellow limit: the hue of hostaperm scarlet.
  - (ii) Blue limit: the hue of monastral red-violet.
  - (iii) Lightness limit for metallics: 35% aluminum flake.
  - (iv) Lightness limit for solids: 50% titanium dioxide white.
  - (v) Solid reds: hue angle of -11 to 38 degrees and maximum lightness of 23 to 45 units.
  - (vi) Metallic reds: hue angle of -16 to 35 degrees and maximum lightness of 28 to 45 units.
 These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, the upper limit is 49 units. The maximum lightness varies as the hue moves from violet to orange. This is a natural consequence of the strength of the colorants, and real colors show this effect.

- (d) "Reference test method," with respect to source sampling, means a method or set of procedures, as described in appendix A to these rules, for obtaining source samples.
- (e) "Refinery unit" means a set of components and other equipment which are a part of a basic process operation, such as distillation, hydrotreating, cracking, or reforming of hydrocarbons.
- (f) "Reid vapor pressure" means the absolute vapor pressure of an organic compound at 100 degrees Fahrenheit as measured by the standard test method set forth in ASTM D-323 or approved equivalent. ASTM D-323 is adopted by reference in these rules. A copy may be inspected at the Lansing office of the air quality division of the department of environmental quality. A copy may be obtained from the Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, at a cost as of the time of adoption of these rules of \$30.00. A copy may also be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428, at a cost as of the time of adoption of these rules of \$30.00.
- (g) "Repetitive production of a product" means, for batch processes or process equipment, producing 10 or more batches of the product. For continuous processes or process equipment, this phrase means running the process or process equipment for a period of more than 10 times the length of time for the raw materials to become the finished product or 24 hours, whichever is longer.
- (h) "Research and development activities" means activities conducted for the primary purpose of developing new production processes and products, testing more efficient production processes, or testing methods for preventing or reducing adverse environmental impacts, if the activities are in compliance with both of the following provisions:
- (i) The activities do not include the production of an intermediate or final product for sale or exchange for commercial profit, except in a de minimis manner.
- (ii) The activities are conducted at a research or laboratory facility that is operated under the close supervision of technically trained personnel.
- (i) "Resist coat" means a coating that is applied to a plastic part before metallic plating to prevent deposits of metal on portions of the plastic part.
- (j) "Responsible official" means, for the purposes of signing and certifying the truth, accuracy, and completeness of permit applications, monitoring and other reports, and compliance certifications, any of the following:
- (i) For a corporation, a president, secretary, treasurer, or vice-president of the corporation who is in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation. The person identified in the preceding sentence may appoint another person as his or her authorized representative under either of the following circumstances:
- (A) The representative is responsible for the overall operation of 1 or more manufacturing, production, or operating facilities applying for or subject to a permit and either the facilities employ more than 250 persons or have gross annual sales or expenditures of more than \$25,000,000.00.
- (B) The representative has responsibilities for the overall operation of a source and is approved in advance by the department. A responsible official shall submit a written request for approval from the department to designate an authorized representative pursuant to this paragraph. The department shall respond, in writing, within 30 days of receipt of the request.
- (ii) For a partnership or sole proprietorship, a general partner or the proprietor.
- (iii) For a county, city, village, township, state, federal, or other public agency, either a principal executive officer or ranking elected official. For this purpose, a principal executive officer includes the chief executive officer who has responsibility for the overall operations of a principal geographic unit of the agency.
- (iv) For affected sources under title IV of the clean air act, the designated representative as defined in title IV of the clean air act.

(k) "Rotogravure printing" means the application of words, designs, pictures, or surface coating to a substrate by means of a roll printing technique that involves intaglio or recessed image areas in the form of cells.

**R 336.1120 Definitions; T.**

Rule 120. As used in these rules:

(a) "Temporary source" means a stationary source, process, or process equipment that commences operation and is located at a geographic site for not more than 12 consecutive months.

(b) "Texture coat" means a coating that is applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating.

(c) "Thin particleboard" means a manufactured board which is 1/4 of an inch or less in thickness and which is made of individual wood particles that have been coated with a binder and formed into flat sheets by pressure.

(d) "Thinning tank," as it pertains to R 336.1631, means any vessel which receives resin from a reactor and to which solvents or other materials are added to thin the resin.

(e) "Tileboard" means paneling that has a colored, waterproof surface coating.

(f) "Toxic air contaminant" or "TAC" means any air contaminant for which there is no national ambient air quality standard and which is or may become harmful to public health or the environment when present in the outdoor atmosphere in sufficient quantities and duration. For the purpose of this definition, all of the following substances shall not be considered to be toxic air contaminants:

(i) Acetylene.

(ii) Aluminum metal dust.

(iii) Aluminum oxide (nonfibrous forms).

(iv) Ammonium sulfate.

(v) Argon.

(vi) Calcium carbonate.

(vii) Calcium hydroxide.

(viii) Calcium oxide.

(ix) Calcium silicate.

(x) Calcium sulfate.

(xi) Carbon dioxide.

(xii) Carbon monoxide.

(xiii) Cellulose.

(xiv) Coal dust.

(xv) Crystalline silica emissions from any of the following processes:

(A) Extraction and processing of all metallic or non-metallic minerals.

(B) Sand production, processing, and drying.

(C) Asphalt production.

(D) Concrete production.

(E) Glass and fiberglass manufacturing.

(F) Foundries.

(G) Foundry residual recovery activities.

(H) Any other process if the crystalline silica emissions are less than 10% of the total PM-10 emissions.

(xvi) Emery.

(xvii) Ethane.

(xviii) Graphite (synthetic).

(xix) Grain dust.

- (xx) Helium.
- (xxi) Hydrogen.
- (xxii) Iron oxide.
- (xxiii) Lead.
- (xxiv) Liquefied petroleum gas (l.p.g.).
- (xxv) Methane.
- (xxvi) Neon.
- (xxvii) Nitrogen.
- (xxviii) Nitrogen oxides.
- (xxix) Nuisance particulates.
- (xxx) Oxygen.
- (xxxi) Ozone.
- (xxxii) Perlite.
- (xxxiii) Portland cement.
- (xxxiv) Propane.
- (xxxv) Silicon.
- (xxxvi) Starch.
- (xxxvii) Sucrose.
- (xxxviii) Sulfur dioxide.
- (xxxix) Vegetable oil mist.
- (xl) Water vapor.
- (xli) Zinc metal dust.

(g) "Toxicological interaction" means the simultaneous exposure to 2 or more hazardous substances which will produce a toxicological response that is greater or less than their individual responses.

(h) "Transfer efficiency" means the percentage of coating solids material that leaves the coating applicator and remains on the surface of the product.

(i) "True vapor pressure" means the equilibrium partial pressure exerted by a liquid or the sum of partial pressures exerted by a mixture of liquids. For refined petroleum stock (gasolines and naphthas) and crude oil, the "true vapor pressure" may be determined in accordance with methods described in American petroleum institute bulletin MPMS C19 S2, "Manual of Petroleum Measurement Standards, Chapter 19, Evaporative Loss Measurements, Section 2, Evaporative Loss From Floating-Roof Tanks," 1997. American petroleum institute bulletin MPMS C19 S2 is adopted in these rules by reference. A copy may be inspected at the Lansing office of the air quality division of the department of environmental quality. A copy may be obtained from the Department of Environmental Quality, Air Quality Division, P.O. Box 30260, Lansing, Michigan 48909-7760, at a cost as of the time of adoption of these rules of \$116.00. A copy may also be obtained from the Global Engineering Documents, HIS Company, 15 Inverness Way East, Englewood, Colorado 80112, at a cost as of the time of adoption of these rules of \$116.00.



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**PROPOSED ADMINISTRATIVE RULES,  
NOTICES OF PUBLIC HEARINGS**

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*MCL 24.242(3) states in part:*

*“... the agency shall submit a copy of the notice of public hearing to the office of regulatory reform for publication in the Michigan register. An agency's notice shall be published in the Michigan register before the public hearing and the agency shall file a copy of the notice of public hearing with the office of regulatory reform.”*

*MCL 24.208 states in part:*

*“Sec. 8. (1) The office of regulatory reform shall publish the Michigan register at least once each month. The Michigan register shall contain all of the following:*

\* \* \*

*(d) Proposed administrative rules.*

*(e) Notices of public hearings on proposed administrative rules.”*

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**PROPOSED ADMINISTRATIVE RULES**

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**ORR # 1996-033**

**DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES**

**DIRECTORS OFFICE**

**EMPLOYMENT SECURITY BOARD OF REVIEW**

Filed with the Secretary of State on  
These rules take effect 7 days after filing with the Secretary of State

(By authority conferred on the director of the department of consumer and industry services by section 36(1) of 1936 PA 1, MCL 421.36 and Executive Reorganization Order No. 1996-2, MCL 445.2001)

R 421.1101, R 421.1103, R 421.1110, R 421.1111, R 421.1203, R 421.1208, R 421.1304, R 421.1305, and R 421.1307 of the Michigan Administrative Code are amended as follows:

**PART 1. GENERAL PROVISIONS**

**R 421.1101 Definitions.**

Rule 101. As used in these rules:

- (a) “Act” means ~~Act No. 1 of the Public Acts of the Extra Session of 1936, as amended, being 1936 EXTRA SESSION PA1, MCL 421.1 et seq. of the Michigan Compiled Laws.~~
- (b) “Agent office” means an unemployment insurance office outside the state of Michigan serving as agent of the ~~commission~~ BUREAU.
- (c) “Board of review” means the Michigan employment security board of review.
- (d) “BUREAU” AND “~~C~~ommission” BOTH means the ~~Michigan employment security commission~~ BUREAU OF WORKERS’ & UNEMPLOYMENT COMPENSATION.
- (e) Unless the context otherwise requires, the word “party” means the ~~commission~~ BUREAU, the employing unit, and the claimant, and includes an agent or attorney of ~~any such person~~ THE BUREAU, THE EMPLOYING UNIT, OR THE CLAIMANT.

**R 421.1103 Principal office of commission and board; location.**

Rule 103.(1) FOR UNEMPLOYMENT COMPENSATION PURPOSES, the principal office of ~~both the Michigan security commission and of the Michigan employment security board of review~~ BUREAU OF WORKERS’ & UNEMPLOYMENT COMPENSATION is ~~7310 Woodward Avenue, CADILLAC PLACE, 3024 W. GRAND BLVD, Detroit, Michigan 48202.~~

(2) THE PRINCIPAL OFFICE OF THE MICHIGAN EMPLOYMENT SECURITY BOARD OF REVIEW IS 105 WEST ALLEGAN, LANSING, MICHIGAN 48909.

**R 421.1110 Employer or claimant fraud; hearing procedure.**

Rule 110.(1)A hearing of employer or claimant fraud under section 54, 54a, 54b, 54c, OR 62(b), (c), or (d) of the act shall be preceded by a written notice of the penalties and issues involved.

(2) Where one party, including the ~~commission~~ BUREAU, has documentary evidence or witnesses concerning another party's alleged fraud, the party shall make a witness list and the documentary evidence available to the other party or parties not less than 5 10 business days before the A fraud hearing.

**R 421.1111 Decisions of board and courts; subject matter index; copies.**

Rule 111. Copies of Michigan court decisions involving the act where the ~~commission~~ BUREAU is a party and ~~board of review decisions~~ shall be kept on file by the ~~commission~~ BUREAU at ~~7310 Woodward Avenue,~~ CADILLAC PLACE, 3024 W. GRAND BLVD., Detroit, Michigan 48202. To the extent practicable, the board of review shall maintain a digest, indexed by subject, of selected board of review and related court decisions. The subject matter index and copies of the decisions shall be available to the public for reference purposes.

**PART 2. APPEALS TO REFEREES**

**R 421.1203 Notice of Hhearing.**

Rule 203. (1) EXCEPT AS REQUIRED BY SUBRULE(4) OF THIS RULE, notice of the time and place of any hearing before a referee, and a short and plain statement of the issues involved, shall be mailed to, or personally served upon, each party by mail or personal service not less than 10 ~~calendar~~ days before the date of the hearing.

(2) The notice shall be deemed mailed on its date of mailing.

(3) When a referee adjourns a hearing for which notice has been given, notice to the parties of the new hearing date may be given orally if the new hearing date is within 10 ~~calendar~~ days of the old hearing date. Otherwise, the new notice shall be mailed.

(4) WHEN A HEARING INVOLVES EMPLOYER OR CLAIMANT FRAUD UNDER SECTION 54, 54a, 54b, 54c, OR 62(b), (c), or (d) OF THE ACT, THE NOTICE OF HEARING SHALL BE MAILED TO, OR PERSONALLY SERVED UPON, EACH PARTY BY MAIL OR PERSONAL SERVICE NOT LESS THAN 20 DAYS BEFORE THE DATE OF THE HEARING.

**R 421.1208 ~~Divided~~ Hearing LOCATION; telephone hearing.**

Rule 208. (1) ~~When it is difficult or impossible for all parties and their witnesses to appear at the same place of hearing, a A referee, in his or her discretion, may order that the testimony of parties and witnesses be taken~~ referee, in his or her discretion, may order that the testimony of any such parties and witnesses be taken BY CONFERENCE TELEPHONE OR AT A PLACE(S) OR PLACES OF HEARING CONVENIENT TO THE PARTIES AND WITNESSES. ~~at places of hearing which are convenient to the parties and witnesses or by conference telephone.~~

(2) If a divided hearing or telephone hearing procedure is used, a party to the hearing shall submit any documents he or she intends to introduce at the hearing to the other parties and to the referee in time to ensure the documents are received before the date of the scheduled hearing. All documents submitted to the referee shall be identified on the record.

(3) If a hearing is conducted by conference telephone, the referee shall, on the record, make inquiries that the referee deems appropriate to ascertain the identity of the individuals participating by telephone.

(4) The referee may, on the referee's motion or on the motion of a party, adjourn any divided hearing or telephone hearing in progress if, in the referee's opinion, conducting the hearing in that manner is unsatisfactory.

### **PART 3. APPEALS TO BOARD OF REVIEW**

#### **R 421.1304 Oral argument; application; reasons.**

Rule 304.(1) Oral argument to the board of review shall be by permission only.

(2) If a party wishes to apply for permission to make an oral argument to the board of review, the party shall make a request, in writing, setting forth the reasons ~~therefor~~ FOR REQUESTING PERMISSION FOR ORAL ARGUMENT.

(3) Reasons for requesting oral argument include, but are not limited to, ANY OF the following:

(a) The appeal involves an issue on which the law is unsettled or unclear.

(b) The appeal involves an issue of major precedential value.

(c) The record made by the referee is so lengthy that oral argument will be of special assistance to the board in reviewing the record.

(d) Unusual complexities affecting the referee's decision were present at any stage of the proceedings.

(e) The referee's decision departed from established legal precedent.

(4) To be timely, the application shall be received by the board of review not later than 20 days after the mailing date of the referee hearing transcript, unless a reason constituting good cause is given.

(5) To be granted, the application shall be approved by 2 members of the board of review panel assigned to review the appeal.

~~(6) A denial of a request for oral argument shall be mailed to the parties not less than 20 days before the issuance of the board's decision or order.~~

(6)(7) The board of review may consider oral argument presented by conference telephone.

#### **R 421.1305 Presentation of additional evidence; application.**

Rule 305.(1) Presentation of additional evidence to the board of review shall be by permission of the board of review only.

(2) If a party wishes to apply to the board of review for permission to present additional evidence, he/ OR she shall make an application in writing setting forth his/ OR her reasons ~~therefor~~ FOR APPLYING FOR PERMISSION.

(3) To be timely, the application shall be received by the board of review noT later than 20 days after the mailing date of the referee hearing transcript, unless a reason constituting good cause is given.

(4) To be granted, the application shall be approved by 2 members of the board of review panel assigned to review the appeal.

~~(5) A denial of a request to present additional evidence shall be mailed to the parties at least 20 days prior to the issuance of the board's decision or order.~~

#### **R 421.1307 Written argument; reply; deadlines; consideration; agreement; application for oral argument or additional evidence not deemed written argument; amicus briefs.**

Rule 307.(1)A party's written argument, if any, together with a statement of service of a copy on each other party, shall be received by the board of review not later than 20 days after the mailing date of ~~either~~ the referee hearing transcript. ~~or a denial of a request for oral argument or additional evidence.~~ However, if a AN ORAL hearing is directed, written argument may be presented at any time at or before the ORAL hearing.

(2) A reply, if any, to another party's timely written argument, together with a statement of service of a copy on each other party, shall be received by the board of review not later than 20 days after the mailing date of the other party's written argument.

- (3) An extension of time for the filing of written argument may be permitted by the board if warranted by the circumstances.
- (4) The board of review may consider a party's written argument only if any of the following conditions exist:
  - (a) All parties are represented by an attorney or other agent of record.
  - (b) All parties agree that the board may consider written argument.
  - (c) The board orders oral argument before it.
  - (d) The board orders evidence produced before it.
- (5) As to subrule (4)(b) of this rule, the agreement shall be signed by each party and received by the board of review not later than 20 days after the mailing date of the referee hearing transcript. ~~or denial of hearing by the board.~~
- (6) A party's application to the board of review for either oral argument or additional evidence shall not be deemed a written argument within the meaning of this rule.
- (7) When the parties are permitted to submit written argument pursuant to this rule and Section 34 of the act, the board of review may consider requests for permission to submit an amicus brief from persons or organizations ~~which~~ THAT are not parties to the matter before the board. If the board, in its discretion, grants such a request, all parties shall be notified and the brief shall thereafter be submitted to the board, together with a statement of service of a copy on each of the parties.

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**NOTICE OF PUBLIC HEARING**

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**DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES**

**MICHIGAN EMPLOYMENT SECURITY BOARD OF REVIEW**

**MICHIGAN ADMINISTRATIVE CODE (ORR #1996-033)**

Rules 421.1101, 421.1103, 421.1110, 421.1111, 421.1203, 421.1208, 421.1304, 421.1305, 421.1307

**NOTICE OF PUBLIC HEARING**

June 28, 2002

2501 Woodlake Circle Okemos Michigan

Conference Room 1 2<sup>nd</sup> floor 9:00 a.m.

The Department of Consumer and Industry Services will hold a public hearing on Friday, June 28, 2002, at the Bureau of Commercial Services, 2501 Woodlake Circle, Okemos, Michigan, in Conference Room 1 at 9:00 a.m. The hearing will be held to receive public comments on modifications to the Rules of Practice before Referees and Michigan Employment Security Board of Review contained in the Michigan Administrative Code.

The Rules of Practice govern appellate procedures before Bureau of Workers' & Unemployment Compensation referees and the Michigan Employment Security Board of Review. The modifications proposed for Rule 101, Rule 103 and Rule 111 reflect recent organization and address changes for the Bureau of Workers' & Unemployment Compensation and the Michigan Employment Security Board of Review. The changes to Rule 110 and Rule 203 modify procedures related to fraud hearings by increasing the minimum time periods for the exchange of documents and for the notice of hearing. Rule 208 is modified to facilitate the conduct of unemployment hearings by conference telephone. Rule 304, Rule 305 and Rule 307 are being amended to eliminate procedural requirements which slow the disposition of Board of Review appeals. These changes will enable the Board to more easily comply with federal timeliness standards. More specifically, requirements that the Board issue written denials of requests for oral argument or to submit additional evidence prior to issuance of a decision are being eliminated. A 20-day period during which parties may submit written argument in lieu of oral argument or additional evidence is also deleted.

The rules are published on the Michigan Government web site at <http://www.michigan.gov/orr> and in the *Michigan Register* in the June 15, 2002 issue. Copies of the draft rules may also be obtained by mail or electronic transmission:

Department of Consumer and Industry Services

Suzanne Mullins, MES Board of Review

P. O. Box 30475

Lansing MI 48909-7975

Phone: 517/241-7266 FAX: 517/ 241-7333 E-mail: semulli@michigan.gov

The public hearing will be conducted in compliance with the 1990 Americans With Disabilities Act, in an accessible building with handicap parking available. Anyone needing assistance to take part in the hearing can call 517/241-7266 to make arrangements.

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**PROPOSED ADMINISTRATIVE RULES**

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**ORR # 2000-7**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SURFACE WATER QUALITY DIVISION**

**CLEANING AGENTS**

Filed with Secretary of State on

These rules take effect 7 days after filing with the Secretary of State

(By authority conferred on the department of environmental quality by section 3903 of Act No. 451 of the Public Acts of 1994, as amended, being §324.3903 of the Michigan Compiled Laws)

R 323.1171, ~~to~~ R 323.1172, R 323.1173, R 323.1175, ~~and~~ R 323.1180, AND R 323.1181 of the Michigan Administrative Code, ~~appearing on pages 1648 to 1650 of the 1979 Michigan Administrative Code,~~ are amended, AND R 323.1174 OF THE CODE IS RESCINDED as follows:

**PART 6. CLEANING AGENTS AND WATER CONDITIONERS**

**R 323.1171 Definitions.**

Rule 171. As used in this part:

~~(a) “Cleaning agent act” means Act No. 226 of the Public Acts of 1971, being §§323.231 to 323.236 of the Michigan Compiled Laws.~~

~~(b)~~ a) “Constituent” means a compound or ingredient contained in the formula of a cleaning agent or water conditioner, other than phosphorus, identified by its common chemical name.

(e b) “DEPARTMENT” MEANS THE DIRECTOR OF THE DEPARTMENT OF ENVIRONMENTAL QUALITY OR HIS OR HER DESIGNEE TO WHOM THE DIRECTOR DELEGATES A POWER OR DUTY BY WRITTEN INSTRUMENT.

(c) “Person” means a manufacturer, processor, formulator, or packager who sells or distributes any cleaning agent or water conditioner for use in this state.

**R 323.1172 APPLICABILITY OF RULES; Exceptions.**

Rule 172. The rules in this part apply to all cleaning agents and water conditioners as defined by ~~the cleaning agent act §324.3901~~ SECTION 3901 OF 1994 PA 451, MCL 324.3901, except FOR ANY OF THE FOLLOWING:

(a) A cleanser, rinsing aid, or sanitizing agent intended primarily for use in an automatic or machine dishwasher.

(b) An industrial and commercial conversion coating agent, corrosion remover, paint remover, rust inhibitor, metal brightener, etchant, or other surface conditioner.

(c) A solvent cleaner or other similar product not normally used with water.

(d) A disinfectant or sanitizer used in institutions, hospitals, and health care facilities.



- (e) A compound or product used in the manufacture or processing of foods and food products, including those used in dairy, beverage, egg, fish, poultry, meat, fruit, and vegetable processing facilities.
- (f) A product intended primarily for personal use, including, but not limited to, bathing soaps, dentifrices, shampoos, cleansing creams, toothpastes, and other products for the care of the human body.
- (g) A product subject to registration or control under federal or state law governing foods, drugs, cosmetics, insecticides, fungicides, and rodenticides.
- (h) A product normally not used with water, such as a cleanser for windows, ovens, or other hard surfaces.
- (i) A water softening chemical, anti-scale chemical, or corrosion inhibitor intended for use in circulatory systems, such as boilers, air conditioners, cooling towers, and hot water heating systems.

**R 323.1173 Statements of product constituents and restrictions.**

~~Rule 173. (1) Before October 1, 1973, a person engaged in the sale or distribution of cleaning agents or water conditioners shall file with the commission a written statement setting forth the percentage of phosphorus by weight for each product, expresses as elemental phosphorus, and setting forth the chemical names of all constituents in all such products sold or distributed by a person in this state.~~

~~(2 1) After September 30, 1972, a~~ A person shall not sell or distribute a new, reformulated, or altered cleaning agent or water conditioner unless ~~he~~ THE PERSON first has filed BOTH OF THE FOLLOWING with the ~~commission~~ DEPARTMENT:

(a) A written statement setting forth the percentage of phosphorus by weight, expressed as elemental phosphorus, and the chemical names of all constituents in such product not previously filed with the ~~commission~~ DEPARTMENT ~~under subrule (1).~~

(b) A written statement that a cleaning agent or water conditioner is not likely to cause unlawful pollution or other conditions or injuries as described in sections 3 and 4 OF 1994 PA 451, MCL §§324.3903 AND 324.3904 ~~of the cleaning agent act.~~

~~(3 2) A person shall furnish additional information about any constituent contained in a cleaning agent or water conditioner, upon request by the commission DEPARTMENT, if the commission DEPARTMENT determines that the information is necessary to protect the waters of the state from unlawful pollution or other injuries AS DESCRIBED in sections 3 and 4 OF 1994 PA 451, MCL 324.3903 AND 324.3904 of the cleaning agent act.~~

~~(4 3) After October 1, 1977, a~~ A person shall not sell or distribute for use in this state a household laundry detergent which contains phosphorus in any form in excess of 0.5% by weight, expressed as elemental phosphorus.

(4) INFORMATION FILED WITH THE DEPARTMENT PURSUANT TO THIS RULE SHALL BE USED BY THE DEPARTMENT ONLY AS THE INFORMATION IS NECESSARY TO IMPLEMENT THE DEPARTMENT'S FUNCTION AND DUTY AS PRESCRIBED BY SECTION 3901 ET SEQ. OF 1994 PA 451, MCL 324.3901 ET SEQ.

**R 323.1174 Confidentiality of information. Rescinded.**

~~Rule 174. Information filed with the commission pursuant to R 323.1173 shall be used by the commission only as the information is necessary to implement the commission's function and duty as prescribed by the cleaning agent act. The information shall be treated as confidential trade secret information in accordance with section 22 of Act No. 306 of the Public Acts of 1969, as amended, being §24.222 of the Michigan Compiled Laws, and shall not be made available to the public except as provided therein.~~

**R 323.1175 Statements and determinations; proofs and consultations.**

Rule 175. (1) ~~a~~ A statement filed with the ~~commission~~ DEPARTMENT pursuant to R 323.1173 may be contested by the ~~commission~~ DEPARTMENT if it determines that a cleaning agent or water conditioner is causing or is likely to cause unlawful pollution or other injuries as defined in sections 3 and 4 OF 1994 PA 451, MCL 324.3903 AND 324.3904 ~~of the cleaning agent act~~.

(2) In determining whether a cleaning agent or water conditioner is causing or is likely to cause unlawful pollution or other injuries as defined in ~~the cleaning agent act~~ SECTIONS 3 AND 4 OF 1994 PA 451, MCL 324.3903 AND 324.3904, the ~~commission~~ DEPARTMENT may seek the counsel and advice of the director of the department of ~~public~~ COMMUNITY health on the health or safety of any users of the cleaning agent or water conditioner and of any state or federal agency or educational institution as to any harmful effect upon animals, aquatic life, or beneficial water uses.

(3) A contest asserted by the ~~commission~~ DEPARTMENT shall be noticed, heard, and determined in accordance with ~~part 3 of these rules~~ 1969 PA 306, MCL 24.201 ET SEQ.

**R 323.1180 ~~Commission~~ DEPARTMENT requests; hearings; determinations.**

Rule 180. The ~~commission~~ DEPARTMENT may request the reduction or removal of a constituent or chemical by a person if the ~~commission~~ DEPARTMENT believes that the use of the constituent or chemical in a cleaning agent or water conditioner, under conditions of intended or probable use, is likely to cause a water pollution or public health problem. The ~~commission~~ DEPARTMENT may issue an order of determination regulating or banning the product or constituent after hearing held in accordance with ~~part 3 of these rules~~ 1969 PA 306, MCL 24.201 ET SEQ., unless procedure is otherwise prescribed in this part, if voluntary reduction or removal is not accomplished as requested.

**R 323.1181 Hearings, notices and appearances.**

Rule 181. (1) When the ~~commission~~ DEPARTMENT determines that a restriction on the nutrient content or other constituent of a cleaning agent or water conditioner is necessary to abate or prevent injury defined in sections 3 and 4 of ~~the~~ 1994 PA 451, MCL 324.3903 AND 324.3904 ~~of the cleaning agent act~~, the ~~commission~~ DEPARTMENT shall notify the person affected by certified mail and set a date for a hearing on the facts and proposed action. The hearing shall be held in accordance with ~~part 3 of these rules~~ 1969 PA 306, MCL 24.201 ET SEQ.

(2) An appearance at a hearing shall be made in person by a duly authorized agent or by counsel.

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**NOTICE OF PUBLIC HEARING**

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**ORR # 2000-7**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SURFACE WATER QUALITY DIVISION**

The Michigan Department of Environmental Quality (DEQ), Surface Water Quality Division, will conduct a public hearing on proposed amendments to administrative rules promulgated pursuant to Part 39, Cleaning Agents, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); R 323.1171 to R 323.1175, R 323.1180, and R 323.1181. These rules regulate the sale and distribution of cleaning agents. The proposed amendments are designed to eliminate all obsolete citations and update citations to be consistent with Act 451.

The public hearing will be held on June 27, 2002, at 2:00 p.m., at the Capital Area District Library, 401 South Capitol, Lansing, Michigan.

Copies of the proposed rules (ORR 2000-007EQ) can be downloaded from the Internet through the Office of Regulatory Reform at <http://www.michigan.gov/orr>. Copies of the rules may also be obtained by contacting the Lansing office at:

Surface Water Quality Division  
Michigan Department of Environmental Quality  
P.O. Box 30273  
Lansing, Michigan 48909-7773  
Phone: 517-241-7504  
Fax: 517-241-8133

All interested persons are invited to attend and present their views. It is requested that all statements be submitted in writing for the hearing record. Anyone unable to attend may submit comments in writing to the address above. Written comments must be received by 5:00 p.m. on July 5, 2002.

Persons needing accommodations for effective participation in the meeting should contact the Surface Water Quality Division at 517-241-7504 one week in advance to request mobility, visual, hearing, or other assistance.

This notice of public hearing is given in accordance with Sections 41 and 42 of Michigan's Administrative Procedures Act, 1969 PA 306, as amended, being Sections 24.241 and 24.242 of the Michigan Compiled Laws. Administration of the rules is by authority conferred on the Director of the DEQ by Section 3903 of Act 451, being Section 324.3903 of the Michigan Compiled Laws, and Executive Order 1995-18. These rules will become effective seven days after filing with the Secretary of State.

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David A. Hamilton, Chief  
Surface Water Quality Division

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**PROPOSED ADMINISTRATIVE RULES**

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**ORR # 2001-002**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SURFACE WATER QUALITY DIVISION**

**WATER RESOURCES PROTECTION**

Filed with the Secretary of State on \_\_\_\_\_  
These rules take effect 7 days after filing with the Secretary of State

(By authority conferred on the department of environmental quality by sections 3103 and 3106 of 1994 PA 451, MCL Act No. 451 of the Public Acts of 1994, as amended, being §§324.3103 and 324.3106 of the Michigan Compiled Laws)

R 323.1043, R 323.1098, R 323.1100 and R 323.1116 of the Michigan Administrative Code are amended as follows: R 323.1041, R 323.1043, R 323.1044, R 323.1050, R 323.1053, R 323.1055, R 323.1057, R 323.1060, R 323.1062, R 323.1064, R 323.1065, R 323.1069, R 323.1075, R 323.1082, R 323.1090, R 323.1092, R 323.1096, R 323.1097, R 323.1100, R 323.1103, R 323.1116, and R 323.1117 of the Michigan Administrative Code are amended as follows:

**PART 4. WATER QUALITY STANDARDS**

**R 323.1041 Purpose.**

Rule 41. The purpose of the water quality standards as prescribed by these rules is to establish water quality requirements applicable to the Great Lakes, the connecting waters, and all other surface waters of the state, to protect the public health and welfare, to enhance and maintain the quality of water, to protect the state's natural resources, and to serve the purposes of Public Law 92-500, as amended, 33 U.S.C. §466 1251 et seq., PART 31, WATER RESOURCES PROTECTION, 1994 PA 451, MCL 324.3101 TO 324.3119 Act No. 245 of the Public Acts of 1929, as amended, being §323.1 et seq. of the Michigan Compiled Laws, and the Great Lakes water quality agreement enacted November 22, 1978, and amended in 1987. These standards may not reflect current water quality in all cases. Water quality of certain SURFACE waters of the state may not meet standards as a result of natural causes or conditions unrelated to human influence. Where SURFACE waters of the state may have been degraded due to past human activities and attainment of standards in the near future is not economically or technically achievable, these standards shall be used to improve water quality. These standards are the minimum water quality requirements by which the SURFACE waters of the state are to SHALL be managed.

**R 323.1043 Definitions; A to L.**

Rule 43. As used in this part:

- (a) "Acceptable daily exposure (ADE)" means an estimate of the maximum daily dose of a substance that is not expected to result in adverse noncancer effects to the general human population, including sensitive subgroups.
- (b) "Acceptable wildlife endpoints" means subchronic and chronic endpoints that affect reproductive or developmental success, organismal viability, or growth or any other endpoint that is, or is directly related to, a parameter that influences population dynamics.
- (c) "Acute-chronic ratio (ACR)" means a standard measure of the acute toxicity of a material divided by an appropriate measure of the chronic toxicity of the same material under comparable conditions.
- (d) "Adverse effect" means any deleterious effect to organisms due to exposure to a substance. The term includes effects that are or may become debilitating, harmful, or toxic to the normal functions of the organism. The term does not include nonharmful effects such as tissue discoloration alone or the induction of enzymes involved in the metabolism of the substance.
- (e) "Agricultural use" means a use of water for agricultural purposes, including livestock watering, irrigation, and crop spraying.
- (f) "Anadromous salmonids" means trout and salmon that ascend streams to spawn.
- (g) "Aquatic maximum value (AMV)" means the highest concentration of a material in the ambient water column to which an aquatic community can be exposed briefly without resulting in unacceptable effects, calculated according to the methodology specified in R 323.1057(2). The AMV is equal to 1/2 of the tier I or tier II final acute value (FAV).
- (h) "Baseline bioaccumulation factor" means, for organic chemicals, a BAF that is based on the concentration of freely dissolved chemicals in the ambient water and takes into account the partitioning of the chemical within the organism. For inorganic chemicals, the term means a BAF that is based on the wet weight of the tissue.
- (i) "Baseline bioconcentration factor" means, for organic chemicals, a BCF that is based on the concentration of freely dissolved chemicals in the ambient water and takes into account the partitioning of the chemical within the organism. For inorganic chemicals, the term means a BCF that is based on the wet weight of the tissue.
- (j) "Bioaccumulation" means the net accumulation of a substance by an organism as a result of uptake from all environmental sources.
- (k) "Bioaccumulation factor (BAF)" means the ratio, in liters per kilogram, of a substance's concentration in tissue of an aquatic organism to its concentration in the ambient water where both the organism and its food are exposed and the ratio does not change substantially over time.
- (l) "Bioaccumulative chemical of concern (BCC)" means a chemical which, upon entering the surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor of more than 1,000 after considering metabolism and other physiochemical properties that might enhance or inhibit bioaccumulation. The human health bioaccumulation factor shall be derived according to R 323.1057(5). Chemicals with half-lives of less than 8 weeks in the water column, sediment, and biota are not BCCs. The minimum BAF information needed to define an organic chemical as a BCC is either a field-measured BAF or a BAF derived using the biota-sediment accumulation factor (BSAF) methodology. The minimum BAF information needed to define an inorganic chemical as a BCC, including an organometal, is either a field-measured BAF or a laboratory-measured bioconcentration factor (BCF). The BCCs to which these rules apply are identified in table 5 of R 323.1057.
- (m) "Bioconcentration" means the net accumulation of a substance by an aquatic organism as a result of uptake directly from the ambient water through gill membranes or other external body surfaces.
- (n) "Bioconcentration factor (BCF)" means the ratio, in liters per kilogram, of a substance's concentration in tissue of an aquatic organism to its concentration in the ambient water in situations where the organism is exposed through the water only and the ratio does not change substantially over time.

(o) "Biota-sediment accumulation factor (BSAF)" means the ratio, in kilograms of organic carbon per kilogram of lipid, of a substance's lipid-normalized concentration in tissue of an aquatic organism to its organic carbon-normalized concentration in surface sediment in situations where the ratio does not change substantially over time, both the organism and its food are exposed, and the surface sediment is representative of average surface sediment in the vicinity of the organism.

(p) "Carcinogen" means a substance which causes an increased incidence of benign or malignant neoplasms in animals or humans or that substantially decreases the time in which neoplasms develop in animals or humans.

(q) "Chronic effect" means an adverse effect that is measured by assessing an acceptable endpoint and results from continual exposure over several generations or at least over a significant part of the test species' projected life span or life stage.

(r) "Coldwater AQUATIC LIFE USE fishery" means ~~waterbodies that contain~~ THE ABILITY OF A WATERBODY TO SUPPORT A BALANCED, INTEGRATED, ADAPTIVE COMMUNITY OF COLDWATER AQUATIC ORGANISMS ~~fish species~~ which thrive in relatively cold water, GENERALLY including any of the following FISH SPECIES:

(i) Trout.

(ii) Salmon.

(iii) Whitefish.

(iv) Cisco.

(s) "Connecting waters" means any of the following:

(i) The St. Marys river.

(ii) The Keweenaw waterway.

(iii) The Detroit river.

(iv) The St. Clair river.

(v) Lake St. Clair.

(t) "Control document" means any authorization issued by the department to any source of pollutants to surface waters of the state that specifies conditions under which the source is allowed to operate.

(u) "Conversion factor" means the decimal fraction of a metal corresponding to an estimate of the percent total recoverable metal that was dissolved in the aquatic toxicity tests that were most important in the derivation of the tier I or tier II aquatic life value for that metal.

(v) "Department" means THE DIRECTOR OF THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY OR HIS OR HER DESIGNEE TO WHOM THE DIRECTOR DELEGATES A POWER OR DUTY BY WRITTEN INSTRUMENT. ~~the Michigan department of environmental quality.~~

(w) "Depuration" means the loss of a substance from an organism as a result of any active or passive process.

(x) "Designated use" means THOSE useS of the surface waters of the state as established by ~~these rules~~, R 323.1100 WHETHER OR NOT THEY ARE BEING ATTAINED. ~~including use for any of the following:~~

~~(i) Industrial, agricultural, and public water supply.~~

~~(ii) Recreation.~~

~~(iii) Warmwater and coldwater fisheries, other aquatic life, and wildlife.~~

~~(iv) Navigation.~~

(y) "Discharge-induced mixing" means the mixing of a discharge and receiving water that occurs due to discharge momentum and buoyancy up to the point where mixing is controlled by ambient turbulence.

(z) "Dissolved oxygen" means the amount of oxygen dissolved in water and is commonly expressed as a concentration in terms of milligrams per liter.

(aa) "Dissolved solids" means the amount of materials dissolved in water and is commonly expressed as a concentration in terms of milligrams per liter.

- (bb) "EC50" means a statistically or graphically estimated concentration that is expected to cause 1 or more specified effects in 50% of a group of organisms under specified conditions.
- (cc) "Effluent" means a wastewater discharge from a point source to the surface waters of the state.
- (dd) "Endangered species act (ESA)" means the endangered species act of 1973, as amended, 16 U.S.C. §1531 et seq.
- (EE) "ENDANGERED OR THREATENED SPECIES" MEANS MICHIGAN SPECIES THAT HAVE BEEN IDENTIFIED AS ENDANGERED OR THREATENED PURSUANT TO PART 4 OF THE ENDANGERED SPECIES ACT AND LISTED IN 50 C.F.R. PART 17 (2000).
- (FF)~~(ee)~~ "Fecal coliform" means a type of coliform bacteria found in the intestinal tract of humans and other warm-blooded animals.
- (GG)~~(ff)~~ "Final acute value (FAV)" means the level of a chemical or mixture of chemicals that does not allow the mortality or other specified response of aquatic organisms to exceed 50% when exposed for 96 hours, except where a shorter time period is appropriate for certain species. The FAV shall be calculated under R 323.1057(2) if appropriate for the chemical.
- (HH)~~(gg)~~ "Final chronic value (FCV)" means the level of a substance or a mixture of substances that does not allow injurious or debilitating effects in an aquatic organism resulting from repeated long-term exposure to a substance relative to the organism's lifespan, calculated using the methodology specified in R 323.1057(2).
- (II) "FISH CONSUMPTION USE" MEANS THE ABILITY OF A SURFACE WATER OF THE STATE TO PROVIDE A FISHERY FOR HUMAN CONSUMPTION THAT IS CONSISTENT WITH THE LEVEL OF PROTECTION PROVIDED BY THESE RULES.
- ~~(hh) "Fisheries, other aquatic life, and wildlife use" means the use of the surface waters of the state by fish, other aquatic life, and wildlife for any life history stage or activity and the protection of fish for human consumption.~~
- (JJ)~~(ii)~~ "Food chain multiplier (FCM)" means the ratio of a BAF to an appropriate BCF.
- (KK)~~(jj)~~ "Harmonic mean flow" means the number of daily flow measurements divided by the sum of the reciprocals of the flows.
- (LL)~~(kk)~~ "Human cancer value (HCV)" means the maximum ambient water concentration of a substance at which a lifetime of exposure from either drinking the water, consuming fish from the water, and conducting water-related recreation activities or consuming fish from the water and conducting water-related recreation activities will represent a plausible upper bound risk of contracting cancer of 1 in 100,000 using the exposure assumptions and methodology specified in R 323.1057(4).
- (MM)~~(ll)~~ "Human noncancer value (HNV)" means the maximum ambient water concentration of a substance at which adverse noncancer effects are not likely to occur in the human population from lifetime exposure through either drinking the water, consuming fish from the water, and conducting water-related recreation activities or consuming fish from the water and conducting water-related recreation activities, using the exposure assumptions and methodology specified in R 323.1057(4).
- (NN)~~(mm)~~ "Industrial water supply" means a water source intended for use in commercial or industrial applications or for noncontact food processing.
- (OO)~~(nn)~~ "Inland lake" means ~~an~~ A SURFACE WATER OF THE STATE THAT IS AN inland body of standing water ~~of the state~~ situated in a topographic depression other than an artificial agricultural pond that is less than 1 acre, unless otherwise determined by the department. The department may designate a dammed river channel or an impoundment as an inland lake based on aquatic resources to be protected.
- (PP)~~(oo)~~ "Keweenaw waterway" means the entire Keweenaw waterway, including Portage lake, Houghton county.



~~(QQ)(pp)~~ "Lake Superior basin-bioaccumulative substances of immediate concern (LSB-BSIC)" means substances identified in the September 1991 binational program to restore and protect the Lake Superior basin, including all of the following:

- (i) 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD).
- (ii) Octachlorostyrene.
- (iii) Hexachlorobenzene.
- (iv) Chlordane.
- (v) Dichloro-diphenyl-trichloroethane (DDT) and metabolites.
- (vi) Dieldrin.
- (vii) Toxaphene.
- (viii) Polychlorinated biphenyls (PCBs).
- (ix) Mercury.

~~(RR)(qq)~~ "LC50" means a statistically or graphically estimated concentration that is expected to be lethal to 50% of a group of organisms under specified conditions.

~~(SS)(#)~~ "Linearized multistage model" means a conservative mathematical model for cancer risk assessment. The model fits linear dose-response curves to low doses. The model is consistent with a no-threshold model of carcinogenesis.

~~(TT)(ss)~~ "Loading capacity" means the greatest amount of pollutant loading that a water can receive without violating water quality standards.

~~(UU)(#)~~ "LOWEST OBSERVED ADVERSE EFFECT LEVEL (LOAEL)" means the lowest tested dose or concentration of a substance that results in an observed adverse effect in exposed test organisms when all higher doses or concentrations result in the same or more severe effects.

~~(VV)(uu)~~ "Lotic" means surface waters of the state that exhibit flow.

### **R 323.1044 Definitions; M to W.**

Rule 44. As used in this part:

(a) "Maximum acceptable toxicant concentration (MATC)" means the concentration obtained by calculating the geometric mean of the lower and upper chronic limits from a chronic test. A lower chronic limit is the highest tested concentration that did not cause the occurrence of a specific adverse effect. An upper chronic limit is the lowest tested concentration which did cause the occurrence of a specific adverse effect and above which all tested concentrations caused such an occurrence.

(b) "Mixing zone" means the portion of a water body in which a point source discharge or venting groundwater is mixed with the receiving water.

(C) "NATURAL BACKGROUND CONDITIONS" MEANS THE BIOLOGICAL, CHEMICAL, AND PHYSICAL CHARACTERISTICS OF THE SURFACE WATERS OF THE STATE UNDER CONDITIONS MINIMALLY AFFECTED BY POINT OR NONPOINT SOURCES OF POLLUTION AS DETERMINED BY THE DEPARTMENT.

~~(D)(e)~~ "Natural water temperature" means the temperature of a body of water without an influence from an artificial source or a temperature as otherwise determined by the department.

~~(E)(d)~~ "New discharge" means any building, structure, facility, or installation from which there is or may be a discharge of substances to the surface waters of the state, the construction of which commenced after ~~the effective date of these rules.~~ JULY 29, 1997.

~~(F)(e)~~ "NO OBSERVED ADVERSE EFFECT LEVEL (NOAEL)" means the highest tested dose or concentration of a substance that results in no observed adverse effect in exposed test organisms where higher doses or concentrations result in an adverse effect.

(G)(f) "Nonpoint source" means a source of material to the surface waters of the state other than a source defined as a point source.

(H)(g) "Octanol-water partition coefficient ( $K_{ow}$ )" means the ratio of the concentration of a substance in the n-octanol phase to its concentration in the aqueous phase in an equilibrated 2-phase octanol-water system. For  $\log K_{ow}$ , the log of the octanol-water partition coefficient is a base 10 logarithm.

(I)(h) "Palatable" means the state of being agreeable or acceptable to the sense of sight, taste, or smell.

(J)(i) "Partial body contact recreation" means any activities normally involving direct contact of some part of the body with water, but not normally involving immersion of the head or ingesting water, including fishing, wading, hunting, and dry boating.

(K)(j) "Plant nutrients" means the chemicals, including nitrogen and phosphorus, necessary for the growth and reproduction of aquatic rooted, attached, and floating plants, fungi, or bacteria.

(L)(k) "Point source" means a discharge that is released to the surface waters of the state by a discernible, confined, and discrete conveyance, including any of the following from which wastewater is or may be discharged:

- (i) A pipe.
- (ii) A ditch.
- (iii) A channel.
- (iv) A tunnel.
- (v) A conduit.
- (vi) A well.
- (vii) A discrete fissure.
- (viii) A container.
- (ix) A concentrated animal feeding operation.
- (x) A boat or other watercraft.

(M)(l) "Public water supply sources" means ~~a surface raw water source that, after conventional treatment, provides a source of safe water for various uses, including human consumption, food processing, cooking, and as a liquid ingredient in foods and beverages.~~ THE SURFACE WATERS OF THE STATE AT THE POINT OF WATER INTAKE AS IDENTIFIED IN THE PUBLICATION "PUBLIC WATER SUPPLY INTAKES IN MICHIGAN," DATED AUGUST 24, 1998, AND CONTIGUOUS AREAS AS THE DEPARTMENT DETERMINES NECESSARY TO ASSURE PROTECTION OF THE SOURCE.

~~(m) "Raw water" means the surface waters of the state before any treatment.~~

(n) "Receiving waters" means the surface waters of the state into which an effluent is or may be discharged.

(o) "Relative source contribution (RSC)" means the factor (percentage) used in calculating an HNV to account for all sources of exposure to a contaminant. The RSC reflects the percent of total exposure that can be attributed to surface water through water intake and fish consumption.

(p) "Risk associated dose (RAD)" means a dose of a known or presumed carcinogenic substance, in milligrams per kilogram per day, that, over a lifetime of exposure, is estimated to be associated with a plausible upper bound incremental cancer risk equal to 1 in 100,000.

(q) "Sanitary sewage" means treated or untreated EFFLUENT ~~wastewater~~ that contains human metabolic and domestic wastes.

(r) "Significant industrial user (SIU)" means either of the following:

(i) A nondomestic user subject to categorical pretreatment standards under 40 C.F.R. §403 (1992) and 40 C.F.R. chapter I, subchapter N (1990).

(ii) A nondomestic user to which 1 ~~one~~ of the following provisions apply~~IES~~:

(A) The user discharges an average of 25,000 gallons per day or more of process wastewater to the publicly owned treatment works, excluding sanitary, noncontact cooling, and boiler blowdown wastewater.

(B) The user contributes a process wastestream that makes up 5% or more of the average dry weather hydraulic or organic capacity of the publicly owned treatment works.

(C) The user is designated as a significant industrial user by the control authority on the basis that the user has a potential for adversely affecting the publicly owned treatment works' operation or for violating any pretreatment standard or requirement.

Upon a finding that a nondomestic user meeting the criteria in this subdivision has no reasonable potential for adversely affecting the publicly owned treatment works' operation or for violating any pretreatment standard or requirement, the control authority may, at any time, on its own initiative or in response to a petition received from a nondomestic user or publicly owned treatment works, determine that a nondomestic user is not a significant nondomestic user.

(s) "Slope factor" means the incremental rate of cancer development calculated using a linearized multistage model or other appropriate model. It is expressed in milligrams per kilogram per day of exposure to the chemical in question and is also known as  $q_1^*$ .

(t) "Standard" means a definite numerical value or narrative statement promulgated by the department to maintain or restore water quality to provide for, and fully protect, a designated use of the surface waters of the state.

(u) "Subchronic effect" means an adverse effect, measured by assessing an acceptable endpoint resulting from continual exposure for a period of time less than the time deemed necessary for a chronic test.

(v) "Surface waters of the state" means all of the following, but does not include drainage ways and ponds used solely for wastewater conveyance, treatment, or control:

(i) The Great Lakes and their connecting waters.

(ii) All inland lakes.

(iii) Rivers.

(iv) Streams.

(v) Impoundments.

(vi) Open drains.

(VII) WETLANDS.

(VIII)(~~vii~~) Other surface bodies of water within the confines of the state.

(w) "Suspended solids" means the amount of materials suspended in water and is commonly expressed as a concentration in terms of milligrams per liter.

(x) "Threshold effect" means an effect of a substance for which there is a theoretical or empirically established dose or concentration below which the effect does not occur.

(y) "Total body contact recreation" means any activities normally involving direct contact with water to the point of complete submergence, particularly immersion of the head, with considerable risk of ingesting water, including swimming.

(Z) "TOTAL MAXIMUM DAILY LOAD (TMDL)" MEANS AN ALLOWABLE POLLUTANT LOADING TO A SURFACE WATER OF THE STATE AS DEFINED IN R 323.1207.

(AA)(~~z~~) "Toxic substance" means a substance, except for heat, that is present in sufficient a concentration or quantity that is or may be harmful to plant life, animal life, or designated uses.

(BB)(~~aa~~) "Uncertainty factor (UF)" means one of several numeric factors used in operationally deriving criteria from experimental data to account for the quality or quantity of the available data.

(CC)(~~bb~~) "Uptake" means the acquisition of a substance from the environment by an organism as a result of any active or passive process.

(DD)~~(ee)~~ "Venting groundwater" means groundwater that is entering a surface water of the state from a facility, as defined in section 324.20101 of 1994 PA 451, MCL Act No. 451 of the Public Acts of 1994, as amended, ~~being §324.20101 of the Michigan Compiled Laws.~~

(EE)~~(dd)~~ "Warmwater AQUATIC LIFE USE fishery" means THE ABILITY OF A WATERBODY TO SUPPORT ~~waterbodies that contain~~ A BALANCED, INTEGRATED, ADAPTIVE COMMUNITY OF WARMWATER AQUATIC ORGANISMS ~~including fish species~~ which thrive in relatively warm water, INCLUDING any of the following FISH SPECIES:

- (i) Bass.
- (ii) Pike.
- (iii) Walleye.
- (iv) Panfish.

(FF) "WASTELOAD ALLOCATION (WLA)" MEANS THE ALLOCATION FOR AN INDIVIDUAL POINT SOURCE WHICH ENSURES THAT THE LEVEL OF WATER QUALITY TO BE ACHIEVED BY THE POINT SOURCE COMPLIES WITH THESE RULES.

(GG)~~(ee)~~ "Wastewater" means any of the following:

- (i) Storm water runoff that could result in injury to a use designated in R 323.1100.
- (ii) Liquid waste resulting from commercial, institutional, domestic, industrial, and agricultural activities, including cooling and condensing waters.
- (iii) Sanitary sewage.
- (iv) Industrial waste.

(HH)~~(ff)~~ "Water quality value" means a tier I or tier II aquatic life or human health value or tier I wildlife value developed under R 323.1057.

(II)~~(gg)~~ "Watershed" means the geographic region within which water drains into a particular river, stream, or body of water.

(JJ) "WETLAND" MEANS LAND CHARACTERIZED BY THE PRESENCE OF WATER AT A FREQUENCY AND DURATION SUFFICIENT TO SUPPORT, AND THAT UNDER NORMAL CIRCUMSTANCES DOES SUPPORT, WETLAND VEGETATION OR AQUATIC LIFE, AND IS COMMONLY REFERRED TO AS A BOG, SWAMP, OR MARSH.

(KK) "WHOLE EFFLUENT TOXICITY" MEANS THE TOTAL TOXIC EFFECT OF AN EFFLUENT MEASURED DIRECTLY WITH A TOXICITY TEST UNDER R 323.1219.

(LL) "WILDLIFE USE" MEANS THAT A WATERBODY WILL NOT LIKELY CAUSE POPULATION-LEVEL IMPACTS TO MAMMALIAN AND AVIAN WILDLIFE POPULATIONS FROM LIFETIME EXPOSURE TO THE WATERBODY AS A SOURCE OF DRINKING WATER AND AQUATIC FOOD, CONSISTENT WITH THE LEVEL OF PROTECTION PROVIDED BY THESE RULES.

(MM)~~(hh)~~ "Wildlife value" means the maximum ambient water concentration of a substance at which adverse effects are not likely to result in population-level impacts to mammalian and avian wildlife populations from lifetime exposure through drinking water and aquatic food supply, using the methodology specified in R 323.1057(3).

### **R 323.1050 Physical characteristics.**

Rule 50. The SURFACE waters of the state shall not have any of the following ~~unnatural~~ physical properties in UNNATURAL quantities which are or may become injurious to any designated use:

- (a) Turbidity.
- (b) Color.
- (c) Oil films.

- (d) Floating solids.
- (e) Foams.
- (f) Settleable solids.
- (g) Suspended solids.
- (h) Deposits.

**R 323.1053 Hydrogen ion concentration.**

Rule 53. The hydrogen ion concentration expressed as pH shall be maintained within the range of 6.5 to 9.0 S.U. in all SURFACE waters of the state, EXCEPT FOR THOSE WATERS WHERE THE pH LIES OUTSIDE THE RANGE OF 6.5 TO 9.0 S.U. DUE TO NATURAL BACKGROUND CONDITIONS. Any artificially induced variation in pH OF WATERS WHERE THE pH LIES OUTSIDE THE RANGE OF 6.5 TO 9.0 S.U. DUE TO NATURAL BACKGROUND CONDITIONS ~~the natural pH shall remain within this range and~~ shall not exceed 0.5 S.U. ~~units of pH~~.

**R 323.1055 Taste- or odor-producing substances.**

Rule 55. The SURFACE waters of the state shall contain no taste-producing or odor-producing substances in concentrations which impair or may impair their use for a public, industrial, or agricultural water supply source or which impair the palatability of fish as measured by test procedures approved by the ~~commission~~ DEPARTMENT.

**R 323.1057 Toxic substances.**

Rule 57. (1) Toxic substances shall not be present in the surface waters of the state at levels that are or may become injurious to the public health, safety, or welfare, plant and animal life, or the designated uses of the waters. As a minimum level of protection, toxic substances shall not exceed the water quality values specified in, or developed pursuant to, the provisions of subrules (2) to (4) of this rule or conditions set forth by the provisions of subrule (6) of this rule. A variance to these values may be granted consistent with the provisions of R 323.1103.

(2) Levels of toxic substances in the surface waters of the state shall not exceed the aquatic life values specified in tables 1 and 2, or, in the absence of such values, values derived according to the following processes, unless site-specific modifications have been developed pursuant to subdivision ~~(e)~~(R) of this subrule:

(a) Minimum data requirements to derive a tier I final acute value (FAV), which is used to calculate a tier I aquatic maximum value (AMV), include the results of acceptable acute tests for 1 freshwater species from each of the following:

- (i) The family salmonidae in the class Osteichthyes.
- (ii) One other family, preferably a commercially or recreationally important warmwater species, in the class Osteichthyes.
- (iii) A third family in the phylum Chordata.
- (iv) A planktonic crustacean.
- (v) A benthic crustacean.
- (vi) An insect.
- (vii) A family in a phylum other than Arthropoda or Chordata.
- (viii) A family in any order of insect or any phylum not already represented.

(b) Minimum data requirements to derive a tier I final chronic value (FCV) include acceptable chronic tests for the data requirements in subdivision (a) of this subrule or acute-to-chronic ratios (ACRs) shall be available WITH AT LEAST 1 SPECIES OF AQUATIC ANIMAL IN AT LEAST 3 DIFFERENT FAMILIES

PROVIDED THAT, OF THE 3 SPECIES, ALL OF THE FOLLOWING PROVISIONS APPLY: ~~for 3 aquatic species as follows:~~

(i) At least 1 IS ~~shall be~~ a fish.

(ii) At least 1 IS ~~shall be~~ AN invertebrate.

(iii) At least 1 IS ~~shall be~~ an acutely sensitive freshwater species. The other 2 may be saltwater species.

(c) The following are acute test types to be used in the development of acute values:

(i) Daphnids, other cladocerans, and midges. Tests with daphnids and other cladocerans shall be started with organisms less than 24 hours old and tests with midges shall be started with second or third instar larvae. The results shall be a 48-hour EC50 based on the total percentage of organisms killed and immobilized. If the results of a 48-hour EC50 based on the total percentage of organisms killed and immobilized are not available, then the results shall be a 48-hour LC50. Tests longer than 48 hours are acceptable if the animals were not fed and the control animals were acceptable at the end of the test.

(ii) Bivalve mollusc embryos and larvae. Results of a 96-hour EC50 based on the percentage of organisms that have incompletely developed shells plus the percentage of organisms killed. If the results of a 96-hour EC50 based on the percentage of organisms that have incompletely developed shells plus the percentage of organisms killed are not available, then the lowest of the following shall be used:

(A) A 48-hour to 96-hour EC50 based on the percentage of organisms that have incompletely developed shells plus the percentage of organisms killed.

(B) A 48-hour to 96-hour EC50 based upon the percentage of organisms that have incompletely developed shells.

(C) A 48-hour to 96-hour LC50.

(iii) All other aquatic animal species. Results of a 96-hour EC50 based on the percentage of organisms exhibiting loss of equilibrium plus the percentage of organisms immobilized plus the percentage of organisms killed. If results of a 96-hour EC50 based on the percentage of organisms exhibiting loss of equilibrium plus the percentage of organisms immobilized plus the percentage of organisms killed are not available, then the lowest of the following shall be used:

(A) The 96-hour EC50 based on the percentage of organisms exhibiting loss of equilibrium plus the percentage of organisms immobilized.

(B) The 96-hour LC50.

(d) The following are chronic test types to be used in the development of chronic values:

(i) Life cycle toxicity tests. Tests with fish should begin with embryos or newly hatched young that are less than 48 hours old, continue through maturation and reproduction, and end not less than 24 days, or 90 days for salmonids, after the hatching of the next generation. Tests with daphnids should begin with young that are less than 24 hours old and last for not less than 21 days, or for ceriodaphnids not less than 7 days. Tests with mysids should begin with young that are less than 24 hours old and continue until 7 days past the median time of first brood release in the controls.

(ii) Partial life cycle toxicity tests for fishes. Exposure to the test material should begin with immature juveniles not less than 2 months before active gonad development, continue through maturation and reproduction, and end not less than 24 days, or 90 days for salmonids, after the hatching of the next generation.

(iii) Early life stage toxicity tests for fishes. Test durations are 28 to 32 days, or 60 days post hatch for salmonids, beginning shortly after fertilization and continuing through embryonic, larval, and early juvenile development.

(iv) Larval survival and growth test for fathead minnows, Pimephales promelas. The test is a static-renewal test 7 days in duration beginning with larvae that are less than 24 hours old. The tests shall be used on a case-by-case basis where the ~~department or discharger~~ demonstrates TO THE SATISFACTION OF THE

DEPARTMENT, OR THE DEPARTMENT DETERMINES, that the results of the tests are comparable to test results produced by any of the test methods identified in paragraphs (i) to (iii) of this subdivision.

(e) All of the following provisions apply in the selection of data for use in aquatic life value development:

(i) All data that are used shall be typed and dated and be accompanied by enough supporting information to indicate that acceptable test procedures, such as the procedures of the American Society of Testing and Materials and the procedures of the Environmental Protection Agency, were used and that the results are reliable.

(ii) Questionable data, data on formulated mixtures and emulsifiable concentrates, data on species that are nonresident to North America, and data obtained with previously exposed organisms shall not be used in the derivation of chemical-specific aquatic life values.

(iii) Acute values reported as "greater than" values and acute values that are above the solubility of the test material shall be used by assuming that the acute value is equal to the greater than value or the upper limit of the test material solubility, respectively.

(iv) The agreement of the data within and between species shall be considered. Acute values that appear to be questionable in comparison with other acute and chronic data for the same species and for other species in the same genus shall not be used.

(v) If the data indicate that 1 or more life stages are at least a factor of 2 more resistant than 1 or more other life stages of the same species, then the data for the more resistant life stages shall not be used in the calculation of aN FAV.

(vi) Chronic values shall be based on the results of flow-through chronic tests in which the concentration of test material in the test solutions was measured at appropriate times during the test. However, renewal tests are acceptable for daphnids or the 7-day fathead minnow test.

(f) Where appropriate and where sufficient dissolved toxicological data or conversion factors are available, aquatic life water quality values for metals shall be expressed as dissolved to better approximate the bioavailable fraction in the water column.

(g) If the acute toxicity of the chemical has not been adequately shown to be related to hardness, pH, or other water quality characteristics, a tier I FAV shall be calculated using the following procedures:

(i) For each species for which at least 1 acceptable acute test result is available, the species mean acute value (SMAV) shall be calculated as the geometric mean of the results of all acceptable flow-through acute toxicity tests in which the concentrations of test material were measured with the most sensitive tested life stage of the species. For a species for which an acceptable FLOW-THROUGH ACUTE TOXICITY TEST IN WHICH THE CONCENTRATIONS OF THE TEST MATERIAL WERE MEASURED ~~acute-test-result~~ is not available, the SMAV shall be calculated as the geometric mean of all acceptable acute toxicity tests with the most sensitive tested life stage.

(ii) For each genus for which 1 or more SMAVs are available, the genus mean acute value (GMAV) shall be calculated as the geometric mean of the SMAVs.

(iii) Order the GMAVs from high to low.

(iv) Assign ranks,  $r$ , to the GMAVs from "1" for the lowest to "n" for the highest. If 2 or more GMAVs are identical, then assign them successive ranks.

(v) Calculate the cumulative probability,  $P$ , for each GMAV as  $r/(n + 1)$ .

(vi) Select the 4 GMAVs that have cumulative probabilities closest to 0.05. If there are fewer than 59 GMAVs, the 4 GMAVs that have cumulative probabilities closest to 0.05 will always be the 4 lowest GMAVs.

(vii) Using the 4 selected GMAVs, and  $P$ s, calculate the tier I FAV as follows:

$$S^2 = \frac{\sum ((\ln G M A V)^2) - \frac{(\sum (\ln G M A V))^2}{4}}{\sum (P) - \frac{(\sum (\sqrt{P}))^2}{4}}$$

$$L = \frac{\sum (\ln G M A V) - S(\sum (\sqrt{P}))}{4}$$

$$A = S(\sqrt{0.05}) + L$$

$$\text{Tier I FAV} = e^A.$$

(h) If data for the chemical are available to show that the acute toxicity of at least 1 fish and 1 invertebrate species is related to a water quality characteristic, then a tier I FAV equation shall be calculated using the following procedures:

(i) For each species for which comparable acute toxicity values are available at 2 or more different values of the water quality characteristic, perform a least squares regression of the acute toxicity values on the corresponding values of the water quality characteristic to obtain the slope and its 95% confidence limits for each species. Because the best documented water quality relationship is between hardness and acute toxicity of metals in fresh water and a log-log relationship fits these data, geometric means and natural logarithms of both toxicity and water quality shall be used. For relationships based on other water quality characteristics, no transformation or a different transformation might fit the data better, and appropriate changes shall be made.

(ii) Decide whether the data for each species are relevant taking into account the range and number of the tested values of the water quality characteristic and the degree of agreement within and between species.

(iii) If useful slopes are not available for at least 1 fish and 1 invertebrate, if the useful slopes are too dissimilar, or if too few data are available to adequately define the relationship between acute toxicity and the water quality characteristic, then return to the provisions of subdivision (g) of this subrule, using the results of tests conducted under conditions and in waters similar to those commonly used for toxicity tests with the species.

(iv) For each species, calculate the geometric mean, W, of the acute values and then divide each of the acute values for each species by W. This normalizes the acute values so that the geometric mean of the normalized values for each species individually and for any combination of species is 1.0. To select tests for calculating W, use the data preference requirements described in subdivision (e)(i) of this subrule.

(v) For each species, calculate the geometric mean, X, of the water quality characteristic data points and then divide each of the data points for each species by X. This normalizes the water quality characteristic data points so that the geometric mean of the normalized data points for each species individually and for any combination of data points is 1.0.

(vi) For each species, perform a least squares regression of the normalized acute values on the normalized water quality characteristic. The resulting slopes and 95% confidence limits will be identical to those obtained in paragraph (i) of this subdivision.

(vii) Perform a least squares regression of all of the normalized acute values on the corresponding normalized values of the water quality characteristic to obtain the pooled acute slope, V, and its 95% confidence limits.

(viii) For each species, calculate the logarithm, Y, of the SMAV at a selected value, Z, of the water quality characteristic using the equation:

$$Y = \ln W - V(\ln X - \ln Z).$$

(ix) For each species, calculate the SMAV at Z using the equation:

$$\text{SMAV} = e^Y.$$



(X) FOR EACH SPECIES FOR WHICH AT LEAST 1 ACCEPTABLE ACUTE TEST RESULT IS AVAILABLE, THE SPECIES MEAN ACUTE VALUE (SMAV) SHALL BE CALCULATED AS THE GEOMETRIC MEAN OF THE RESULTS OF ALL ACCEPTABLE FLOW-THROUGH ACUTE TOXICITY TESTS IN WHICH THE CONCENTRATIONS OF TEST MATERIAL WERE MEASURED WITH THE MOST SENSITIVE TESTED LIFE STAGE OF THE SPECIES. FOR A SPECIES FOR WHICH AN ACCEPTABLE FLOW-THROUGH ACUTE TOXICITY TEST IN WHICH THE CONCENTRATIONS OF THE TEST MATERIAL WAS MEASURED IS NOT AVAILABLE, THE SMAV SHALL BE CALCULATED AS THE GEOMETRIC MEAN OF ALL ACCEPTABLE ACUTE TOXICITY TESTS WITH THE MOST SENSITIVE TESTED LIFE STAGE.

(XI)~~(x)~~ Obtain the tier I FAV at Z by using the procedure described in subdivision (g)(ii) to (vii) of this subrule.

(XII)~~(xi)~~ The tier I FAV equation for any selected value of a water quality characteristic is:

$$\text{tier I FAV} = e^{(V[\ln(\text{water quality characteristic})] + A - V[\ln Z])}$$

Where:

V = pooled acute slope.

A =  $\ln(\text{tier 1 FAV at } Z)$ .

Z = selected value of the water quality characteristic as used in paragraph (viii) of this subdivision.

(i) If the acute and chronic toxicity of the chemical has not been adequately shown to be related to hardness, pH, or other water quality characteristics, then a tier I final chronic value (FCV) shall be calculated using the following procedures:

(i) If at least 1 maximum acceptable toxicant concentration (MATC) is available to meet each of the minimum data requirements as described in subdivision (a) of this subrule, then a species mean chronic value (SMCV) shall be determined for each species by calculating the geometric mean of the MATCs selected from acceptable tests in the following order of preference:

(A) All life cycle and partial life cycle toxicity tests with the species.

(B) All early life stage tests.

(C) All 7-day larval survival and growth tests for fathead minnows. Genus mean chronic values (GMCV) shall then be calculated as the geometric mean of the SMCVs for the genus. The tier I FCV shall be obtained using the procedure described in subdivision (g)(i) to (vii) of this subrule substituting FCV for FAV, chronic for acute, SMCV for SMAV, and GMCV for GMAV.

(ii) If MATCs are not available to meet the minimum data requirements as described in subdivision (a) of this subrule, then the tier I FCV shall be calculated as follows:

(A) For each MATC for which at least 1 corresponding acute value is available, calculate an acute-to-chronic ratio (ACR). An ACR is calculated by dividing the geometric mean of the results of all acceptable flow-through acute tests in which the concentrations are measured by the MATC. Static tests are acceptable for daphnids and midges. For fish, the acute test or tests should be conducted with juveniles. Tests used to develop an ACR shall meet 1 of the following conditions and be used in the following order of preference:

(1) The acute test or tests are part of the same study as the chronic test.

(2) The acute test or tests were conducted as part of a different study as the chronic tests, but in the same laboratory and dilution water.

(3) The acute and chronic tests were conducted in the same dilution water, but in different laboratories.

(B) For each species, calculate the species mean ACR (SMACR) as the geometric mean of all ACRs available for that species.

(C) The tier I ACR can be obtained in the following 3 ways, depending on the data available:

- (1) If the species mean ACR seems to increase or decrease as the SMAVs increase, then the tier I ACR shall be calculated as the geometric mean of the ACRs for species that have SMAVs which are close to the FAV.
- (2) If a major trend is not apparent and the ACRs for all species are within a factor of 10, then the tier I ACR shall be calculated as the geometric mean of all of the SMACRs.
- (3) If the SMACRs are less than 2.0, and especially if they are less than 1.0, acclimation has probably occurred during the chronic test. In this situation, because continuous exposure and acclimation cannot be assured to provide adequate protection in field situations, the tier I ACR shall be assumed to be 2, so that the tier I FCV is equal to the aquatic maximum value (AMV).
- (D) Calculate the tier I FCV by dividing the tier I FAV by the tier I ACR.
- (j) If data for the chemical are available to show acute or chronic toxicity to at least 1 species is related to a water quality characteristic, then a tier I FCV equation shall be calculated using the following procedures:
  - (i) If MATCs are available to meet the minimum data requirements described in subdivision (a) of this subrule, then a tier I FAV equation shall be derived as follows:
    - (A) For each species for which comparable MATCs are available at 2 or more different values of the water quality characteristic, perform a least squares regression of the MATCs on the corresponding values of the water quality characteristic to obtain the slope and its 95% confidence limits for each species. Because the best documented water quality relationship is that between hardness and chronic toxicity of metals in fresh water and a log-log relationship fits these data, geometric means and natural logarithms of both toxicity and water quality shall be used. For relationships based on other water quality characteristics, no transformation or a different transformation might fit the data better, and appropriate changes shall be made.
    - (B) Decide whether the data for each species are relevant, taking into account the range and number of the tested values of the water quality characteristic and the degree of agreement within and between species.
    - (C) If a useful chronic slope is not available for at least 1 species or if the available slopes are too dissimilar or if too few data are available to adequately define the relationship between the MATC and the water quality characteristic, then assume that the chronic slope is the same as the acute slope, or return to subdivision (i) of this subrule, using the results of tests conducted under conditions and in water similar to conditions and water commonly used for toxicity tests with the species.
    - (D) For each species, calculate the geometric mean of the available MATCs, M, and then divide each MATC for a species by the mean for the species. This normalizes the MATCs so that the geometric mean of the normalized values for each species individually, and for any combination of species, is 1.0. To select tests for calculating M, use the data preference requirements described in subdivision (i)(i) of this subrule.
    - (E) For each species, calculate the geometric mean, P, of the water quality characteristic data points and then divide each of the data points for each species by P. This normalizes the water quality characteristic data points so that the geometric mean of the normalized data points for each species individually and for any combination of data points is 1.0.
    - (F) For each species, perform a least squares regression of the normalized chronic toxicity values on the corresponding normalized values of the water quality characteristic.
    - (G) Perform a least squares regression of all the normalized chronic values on the corresponding normalized values of the water quality characteristic to obtain the pooled chronic slope, L, and its 95% confidence limits.
    - (H) For each species, calculate the logarithm, Q, of the SMCV at a selected value, Z, of the water quality characteristic using the equation:
$$Q = \ln M - L(\ln P - \ln Z).$$
    - (I) For each species, calculate aN SMCV at Z using the equation:
$$\text{SMCV} = e^Q.$$
    - (J) Obtain the tier I FCV at Z by using the procedure described in subdivision (g)(ii) to (vii) of this subrule.

(K) The tier I FCV equation is written as follows:

$$\text{tier I FCV} = e^{(L[\ln \text{ water quality characteristic}] + S - L[\ln Z])}$$

Where:

L = pooled chronic slope.

S =  $\ln(\text{tier I FCV at } Z)$ .

Z = selected value of the water quality characteristic as used in subparagraph (h) of this paragraph.

(ii) If MATCs are not available to meet the minimum data requirements described in subdivision (a) of this subrule, then the tier I FCV equation shall be calculated as follows:

(A) If ACRs are available for enough species at enough values of the water quality characteristic to indicate that the ACR appears to be the same for all species and appears to be independent of the water quality characteristic, then calculate the tier I ACR as the geometric mean of the available SMACRs. The ACR shall be derived using the provisions in subdivision (i)(ii) of this subrule.

(B) Calculate the tier I FCV at the selected value Z of the water quality characteristic by dividing the tier I FCV FAV at Z, derived in subdivision (h) of this subrule, by the tier I ACR.

(C) Use V = pooled acute slope as L = pooled chronic slope.

(D) The tier I FCV equation is written as follows:

$$\text{tier I FCV} = e^{(L[\ln \text{ water quality characteristic}] + S - L[\ln Z])}$$

Where:

L = pooled chronic slope.

S =  $\ln(\text{tier I FCV at } Z)$ .

Z = selected value of the water quality characteristic as used in subparagraph (B) of this paragraph.

(k) If the minimum data requirements in subdivision (a) of this subrule are not available to derive a tier I FAV, it is possible to derive a tier II FAV if the data base for the chemical contains a GMAV for Ceriodaphnia sp., Daphnia sp., or Simocephalus sp. and 1 other freshwater species that meets any additional minimum requirements of subdivision (a) of this subrule. To select tests for calculating a tier II FAV, use the data preference requirements described in subdivision (g)(i) of this subrule. The tier II FAV shall be calculated for a chemical as follows:

(i) The lowest GMAV in the database is divided by the tier II acute factor (AF) from table 3 corresponding to the number of satisfied tier I minimum data requirements listed in subdivision (a) of this subrule.

(ii) If appropriate, the tier II FAV shall be made a function of a water quality characteristic in a manner similar to that described in subdivision (h) of this subrule.

(l) If the minimum data requirements in subdivision (b) of this subrule are not available to derive a tier I FCV, it is possible to derive a tier II FCV for a chemical by 1 of the following methods listed in order of preference:

(i) Tier II FCV =  $\frac{\text{tier I FAV}}{\text{tier II ACR}}$

tier II ACR

Where:

Tier II ACR = tier II acute-chronic ratio determined by assuming enough ACRs of 18 so that the total number of ACRs for the chemical equals 3. The tier II ACR is the geometric mean of the 3 ACRs.

(ii) Tier II FCV =  $\frac{\text{tier II FAV}}{\text{tier I ACR}}$

tier I ACR

Where:

Tier I ACR = the final acute-chronic ratio for the chemical derived using the provisions in subdivision (i)(ii) of this subrule.

(iii) Tier II FCV =  $\frac{\text{tier II FAV}}{\text{tier II ACR}}$

(iv) If appropriate, the tier II FCV shall be made a function of a water quality characteristic in a manner similar to that described in subdivision (j) of this subrule.

(m) If, for a commercially or recreationally important species of the surface waters of the state, the geometric mean of the acute values or chronic values from a flow-through test in which the concentrations of the test materials were measured is lower than the calculated FAV or FCV, then that geometric mean shall be used as the FAV or FCV instead of the calculated FAV or FCV. For chemicals that have final acute or chronic value equations, if the SMAV or SMCV at Z of a commercially or recreationally important species of the surface waters of the state is lower than the calculated FAV or FCV at Z, then that SMAV or SMCV shall be used as the FAV or FCV at Z.

(n) The tier I or tier II aquatic maximum value (AMV) shall be derived by dividing the tier I or tier II FAV by 2.

(o) A water concentration protective of aquatic plants shall be evaluated for a chemical on a case-by-case basis if data are available from tests with an important aquatic plants species in which the concentration of test material is measured and the endpoint is biologically important. If appropriate, the tier I or tier II FCV shall be lowered to be protective of aquatic plants.

(p) On the basis of all available pertinent laboratory and field information, determine if the tier I and tier II aquatic life values are consistent with sound scientific evidence. If the values are not consistent with sound scientific evidence, then the values shall be adjusted to more appropriately reflect the weight of scientific evidence.

(q) The tier I or tier II AMV shall be applied as a 24-hour average and compliance shall be based on the average of all samples taken at a site within the same 24-hour period. The tier I or tier II FCV shall be applied as a monthly average and compliance shall be based on the average of all daily measurements taken at a site within the same calendar month.

(r) Aquatic life values may be modified on a site-specific basis to be more or less stringent to reflect local environmental conditions. All of the following provisions apply to aquatic life values modification:

(i) Less stringent modifications shall be based on sound scientific rationale, shall be protective of designated uses of the surface waters of the state, and shall not jeopardize the continued existence of endangered or threatened species listed or proposed under section 4 of the endangered species act or result in the destruction or adverse modification of the species' critical habitat.

(ii) Modifications may be derived using the recalculation procedure, water effect ratio procedure, or resident species procedure described in section 3.7 entitled "Site-Specific Aquatic Life Criteria" in chapter 3 of the United States EPA Water Quality Standards Handbook, second edition - revised (1994).

(iii) For the purposes of implementing the recalculation and resident species procedures described under paragraph (ii) of this subdivision, species that occur at a site include species to which any of the following provisions apply:

(A) The species are present at the site at any time of the year or are determined by a representative sampling regime.

(B) The species are present at the site only seasonally due to migration.

(C) The species are present intermittently because they periodically return to or extend their ranges into the site.

(D) The species were present at the site in the past, are not currently present at the site due to degraded conditions, and are expected to return to the site when conditions improve.

(E) The species are present in nearby bodies of water, are not currently present at the site due to degraded conditions, and are expected to be present at the site when conditions improve.

(iv) For the purposes of implementing the recalculation and resident species procedures described under paragraph (ii) of this subdivision, the species that occur at a site do not include species which were once present at the site, but which cannot exist at the site now due to permanent physical alteration of the habitat at the site.

(v) More stringent modifications to protect endangered or threatened species listed or proposed under section 4 of the endangered species act may be accomplished using either of the following procedures:

(A) For a listed or proposed species or for a surrogate of a listed or proposed species, if the SMAV or SMCV is lower than the calculated FAV or FCV, the lower SMAV or SMCV may be used instead of the calculated FAV or FCV in developing site-specific modified criteria.

(B) The recalculation procedure described in section 3.7 entitled "Site-Specific Aquatic Life Criteria" in chapter 3 of the United States EPA Water Quality Standards Handbook, second edition-revised (1994).

(vi) Any site-specific modifications developed pursuant to this subdivision shall be approved by the department.

(3) Levels of toxic substances in the surface waters of the state shall not exceed the wildlife values specified in table 4 or, in the absence of such values, the wildlife values derived according to the following process, unless site-specific modifications have been developed pursuant to subdivision (n) of this subrule:

(a) Tier I wildlife values for the BCCs listed in table 5, with the exception of the wildlife values listed in table 4, shall be calculated using the following equation:

$$WV = \frac{\frac{TD}{UF_A \times UF_S \times UF_L} \times Wt}{W + \sum(F_{TLi} \times BAF_{TLi}^{WL})}$$

Where:

WV = wildlife value in milligrams of substance per liter (mg/L).

TD = test dose (TD) in milligrams of substance per kilograms per day (mg/kg/d) for the test species. This shall be either a NOAEL or a LOAEL.

UF<sub>A</sub> = uncertainty factor (UF) for extrapolating toxicity data across species (unitless). A species-specific UF shall be selected and applied to each representative species, consistent with the equation.

UF<sub>S</sub> = UF for extrapolating from subchronic to chronic exposures (unitless).

UF<sub>L</sub> = UF for LOAEL to NOAEL extrapolations (unitless).

Wt = average weight in kilograms (kg) for the representative species.

W = average daily volume of water consumed in liters per day (L/d) by the representative species.

F<sub>TLi</sub> = average daily amount of food consumed from trophic level i in kilograms per day (kg/d) by the representative species.

BAF<sub>TLi</sub><sup>WL</sup> = bioaccumulation factor (BAF) for wildlife food in trophic level i in liters per kilogram (L/kg), developed using the BAF methodology in subrule (5) of this rule. For consumption of piscivorous birds by other birds, for example herring gulls by eagles, the BAF is derived by multiplying the trophic level 3 BAF for fish by a biomagnification factor to account for the biomagnification from fish to the consumed birds.

(b) Piscivorous species are identified as the focus of concern for wildlife values. Three avian species - eagle, kingfisher, and herring gull - and 2 mammalian species - mink and otter - are used as representative species for protection. The TD obtained from toxicity data for each taxonomic class is used to calculate WVs for each of the 5 representative species.

(c) The avian WV is the geometric mean of the WVs calculated for the 3 representative avian species. The mammalian WV is the geometric mean of the WVs calculated for the 2 representative mammalian species. The lower of the mammalian and avian WVs shall be the final WV.

(d) A TD value is required for WV calculation. To derive a WV, the data set shall be sufficient to generate a subchronic or chronic dose-response curve for any given substance for both mammalian and avian species using

acceptable wildlife endpoints. In reviewing the toxicity data available that meet the minimum data requirements for each taxonomic class, data from peer-reviewed field studies of wildlife species take precedence over other types of studies where the studies are of adequate quality. An acceptable field study shall be of subchronic or chronic duration, provide a defensible, chemical-specific dose-response curve in which cause and effect are clearly established, and assess acceptable wildlife endpoints. When acceptable wildlife field studies are not available or are determined to be of inadequate quality, the needed toxicity information may come from peer-reviewed laboratory studies. When laboratory studies are used, preference shall be given to laboratory studies with wildlife species over traditional laboratory animals to reduce uncertainties in making interspecies extrapolations. All available laboratory data and field studies shall be reviewed to corroborate the final WV, to assess the reasonableness of the toxicity value used, and to assess the appropriateness of any UFs that are applied. All of the following requirements apply when evaluating the studies from which a TD is derived:

- (i) The mammalian data shall come from at least 1 well-conducted study of 90 days or more that is designed to observe acceptable wildlife endpoints.
- (ii) The avian data shall come from at least 1 well-conducted study of 70 days or more that is designed to observe acceptable wildlife endpoints.
- (iii) In reviewing the studies from which a TD is derived for use in calculating a WV, studies involving exposure routes other than oral may be considered only when an equivalent oral daily dose can be estimated and technically justified. The WV calculations are based on an oral route of exposure.
- (iv) In assessing the studies that meet the minimum data requirements, preference should be given to studies that assess effects on developmental or reproductive endpoints because, in general, these are more important endpoints in ensuring that a population's productivity is maintained.
- (e) In selecting data to be used in the derivation of WVs, the evaluation of acceptable endpoints will be the primary selection criterion. All data that are not part of the selected subset may be used to assess the reasonableness of the toxicity value and the appropriateness of the UFs. In addition, the following provisions shall apply:
  - (i) If more than 1 TD value based on different endpoints of toxicity is available within a taxonomic class, then that TD, which is likely to reflect best potential impacts to wildlife populations through resultant changes in mortality or fecundity rates, shall be used for the calculation of WVs.
  - (ii) If more than 1 TD based on the same endpoint toxicity is available within a taxonomic class, then the TD from the most sensitive species shall be used.
  - (iii) If more than 1 TD based on the same endpoint of toxicity is available for a given species, then the TD for that species shall be calculated using the geometric mean of the TDs for the same endpoint of toxicity.
  - (f) If a TD is available in units other than milligrams of substance per kilograms per day (mg/kg/d), then the following procedures shall be used to convert the TD to the appropriate units before calculating a WV:
    - (i) If the TD is given in milligrams of toxicant per liter of water consumed by the test animals (mg/L), then the TD shall be multiplied by the daily average volume of water consumed by the test animals in liters per day (L/d) and divided by the average weight of the test animals in kilograms (kg).
    - (ii) If the TD is given in milligrams of toxicant per kilogram of food consumed by the test animals (mg/kg), then the TD shall be multiplied by the average amount of food in kilograms consumed daily by the test animals (kg/d) and divided by the average weight of the test animals in kilograms (kg).
    - (g) When drinking and feeding rates and body weight are needed to express the TD in milligrams of substance per kilograms per day (mg/kg/d), they are obtained from the study from which the TD was derived. If not already determined, body weight and drinking and feeding rates are to be converted to a wet weight basis. If the study does not provide the needed values, then the values shall be determined as follows:

(i) For studies done with domestic laboratory animals, use either the publication entitled "Registry of Toxic Effects, a Comprehensive Guide," 1993, United States Department of Health and Human Services, NIOSH Publication No. 97-119 ~~93-120~~, or the publication entitled "Recommendations for and Documentation of Biological Values for use in Risk Assessment," United States EPA, 1988 NTIS-PB88-179874.

(ii) If the references in paragraph (i) of this subdivision do not contain the information for the species used in a given study, then the following allometric equations shall be used:

(A) For mammalian species, the general allometric equations are as follows:

$$(1) F = 0.0687 \times (Wt)^{0.82}$$

Where:

F = feeding rate of mammalian species in kilograms per day (kg/d) dry weight.

Wt = average weight in kilograms (kg) of the test animals.

$$(2) W = 0.099 \times (Wt)^{0.90}$$

Where:

W = drinking rate of mammalian species in liters per day (L/d).

Wt = average weight in kilograms (kg) of the test animals.

(B) For avian species, the general allometric equations are as follows:

$$(1) F = 0.0582 (Wt)^{0.65}$$

Where:

F = feeding rate of avian species in kilograms per day (kg/d) dry weight.

Wt = average weight in kilograms (kg) of the test animals.

$$(2) W = 0.059 \times (Wt)^{0.67}$$

Where:

W = drinking rate of avian species in liters per day (L/d).

Wt = average weight in kilograms (kg) of the test animals.

(h) If a NOAEL is unavailable as the TD and a LOAEL is available, then the LOAEL may be used to estimate the NOAEL. If used, the LOAEL shall be divided by an UF to estimate a NOAEL for use in deriving WVs. The value of the UF shall not be less than 1 and should not exceed 10, depending on the dose-response curve and any other available data, and is represented by  $UF_L$  in the equation expressed in subdivision (a) of this subrule.

(i) If only subchronic data are available, then the TD may be derived from subchronic data. In such cases, the TD shall be divided by an UF to extrapolate from subchronic to chronic levels. The value of the UF shall not be less than 1 and should not exceed 10, and is represented by  $UF_S$  in the equation expressed in subdivision (a) of this subrule. This UF is to be used when assessing highly bioaccumulative substances where toxicokinetic considerations suggest that a bioassay of limited length underestimates chronic effects.

(j) The selection of the  $UF_A$  shall be based on the available toxicological data and on available data concerning the physicochemical, toxicokinetic, and toxicodynamic properties of the substance in question and the amount and quality of available data. This  $UF_A$  is a UF that is intended to account for differences in toxicological sensitivity among species and both of the following provisions apply:

(i) The  $UF_A$  shall not be less than 1 and should not exceed 100 and shall be applied to each of the 5 representative species based on existing data and best professional judgment. The value of  $UF_A$  may differ for each of the representative species.

(ii) The  $UF_A$  shall be used only for extrapolating toxicity data across species within a taxonomic class; however, an interclass extrapolation employing a  $UF_A$  may be used for a given chemical if it can be supported by a validated biologically-based dose-response model or by an analysis of interclass toxicological data, considering acceptable endpoints, for a chemical analog that acts under the same mode of toxic action.

(k) The body weights (Wt), feeding rates ( $F_{TLi}$ ), drinking rates (W), and trophic level dietary composition (as food ingestion rate and percent in diet) for each of the 5 representative species are presented in table 6. The methodology for development of bioaccumulation factors is presented in subrule (5) of this rule. Trophic level 3 and 4 BAFs are used to derive WVs because these are the trophic levels at which the representative species feed.

(l) Determine, on the basis of all pertinent data available, whether the wildlife values derived are consistent with sound scientific evidence. If they are not, the values shall be adjusted to more appropriately reflect the weight of available scientific evidence.

(m) The WVs shall be applied as a monthly average and compliance shall be based on the average of all daily measurements taken at a site within the same calendar month.

(n) Wildlife values may be modified on a site-specific basis to be more or less stringent to reflect local environmental conditions. The modifications shall be derived by making appropriate site-specific adjustments to the methodology in this subrule. The following provisions shall apply:

(i) Less stringent modifications shall be protective of designated uses of the surface waters of the state, shall be based on sound scientific rationale, shall not jeopardize the continued existence of endangered or threatened species listed or proposed under section 4 of the endangered species act or result in the destruction or adverse modification of the species' critical habitat, and shall consider the mobility of both the prey organisms and wildlife populations in defining the site for which criteria are developed.

(ii) More stringent modifications to protect endangered or threatened species listed or proposed under section 4 of the endangered species act may be accomplished by the use of an intraspecies uncertainty factor to account for protection of individuals within a wildlife population.

(iii) Any site-specific modifications developed pursuant to this subdivision shall be approved by the department.

(4) Levels of toxic substances in the surface waters of the state shall not exceed the human health values specified in tables 7 and 8 or, in the absence of such values, the values derived according to the following process, unless site-specific modifications have been developed pursuant to subdivision (h) of this subrule:

(a) Human cancer values (HCVs) and human noncancer values (HNVs) shall be derived based on either a tier I or tier II classification. The 2 tiers are primarily distinguished by the amount of toxicity data available for deriving the concentration levels and the quantity and quality of data on bioaccumulation. The best available toxicity data on the adverse health effects of a chemical and the best data on bioaccumulation factors shall be used when developing human health values. The toxicity data shall include data from well-conducted epidemiological studies or animal studies, or both, that provide, for carcinogens, an adequate weight of evidence of potential human carcinogenicity and, for tier I values for noncarcinogens, a dose-response relationship involving critical effects biologically relevant to humans. **THESE DATA SHALL BE OBTAINED FROM SOURCES DESCRIBED IN 40 C.F.R PART 132, APPENDIX C, ITEM II, "MINIMUM DATA REQUIREMENTS" (1995), INCLUDING THE INTEGRATED RISK INFORMATION SYSTEM (IRIS)** ~~Such information shall be obtained from the EPA data base entitled "Integrated Risk Information System (IRIS)," United States EPA Office of Health and Environmental Assessment, Environmental Criteria and Assessment Office, Cincinnati, Ohio,~~ the scientific literature, and other informational databases, studies, or reports that contain adverse health effects data of adequate quality for use in this procedure. Strong consideration shall be given to the most currently available guidance provided by IRIS in deriving values, supplemented with any recent data not incorporated into IRIS. Minimum data requirements to derive the human health values are as follows:

(i) HCVs shall be derived if there is adequate evidence of potential human carcinogenic effects for a chemical. Carcinogens shall be classified, depending on the weight of evidence, as either human carcinogens, probable human carcinogens, or possible human carcinogens. To develop tier I and tier II human cancer values, the following minimum data sets are necessary:



(A) Weight of evidence of potential human carcinogenic effects sufficient to derive a tier I HCV shall generally include human carcinogens and probable human carcinogens and can include, on a case-by-case basis, possible human carcinogens if studies have been well-conducted, although based on limited evidence, when compared to studies used in classifying human and probable human carcinogens. The decision to use data on a possible human carcinogen for deriving tier I values shall be a case-by-case determination. In determining whether to derive a tier I HCV, available information on mode of action, such as mutagenicity/genotoxicity (determinations of whether the chemical interacts directly with DNA), structure activity, and metabolism shall also be considered.

(B) Weight of evidence of possible human carcinogenic effects sufficient to derive a tier II HCV shall include the possible human carcinogens for which, at a minimum, there are data sufficient for quantitative risk assessment, but for which data are inadequate for tier I value development due to a tumor response of marginal statistical significance or inability to derive a strong dose-response relationship. In determining whether to derive tier II human cancer values, available information on mode of action, such as mutagenicity/genotoxicity (determinations of whether the chemical interacts directly with DNA), structure activity, and metabolism shall also be considered. As with the use of data on possible human carcinogens in developing tier I values, the decision to use data on possible human carcinogens to derive tier II values shall be made on a case-by-case basis.

(ii) To derive HNVs, all available toxicity data shall be evaluated. The full range of possible health effects of a chemical shall be considered in order to best describe the dose-response relationship of the chemical, and to calculate values which will protect against the most sensitive endpoint or endpoints of toxicity. Although it is desirable to have an extensive database that considers a wide range of possible adverse effects, this type of data exists for a very limited number of chemicals. For many others, there is a range in quality and quantity of data available. To assure minimum reliability of values, it is necessary to establish a minimum database with which to develop tier I or tier II values. The following procedures represent the minimum data sets necessary for this procedure:

(A) The minimum data set sufficient to derive a tier I HNV shall include at least 1 well-conducted epidemiologic study or animal study. A well-conducted epidemiologic study shall quantify exposure levels and demonstrate positive association between exposure to a chemical and adverse effects in humans. A well-conducted study in animals shall demonstrate a dose-response relationship involving 1 or more critical effects biologically relevant to humans. Ideally, the duration of a study should span multiple generations of exposed test species or at least a major portion of the lifespan of 1 generation. This type of data is currently very limited. By the use of uncertainty adjustments, shorter-term studies, such as 90-day subchronic studies, with evaluation of more limited effects, may be used to extrapolate to longer exposures or to account for a variety of adverse effects. For tier I values developed pursuant to this procedure, such a limited study shall be conducted for not less than 90 days in rodents or for 10% of the lifespan of other appropriate test species and shall demonstrate a no observable adverse effect level (NOAEL). Chronic studies of 1 year or longer with rodents or 50% of the lifespan or longer with other appropriate test species that demonstrate a lowest observable adverse effect level (LOAEL) may be sufficient for use in tier I value derivation if the effects observed at the LOAEL were relatively mild and reversible as compared to effects at higher doses. This does not preclude the use of a LOAEL from a study of chronic duration with only 1 or 2 doses if the effects observed appear minimal when compared to effect levels observed at higher doses in other studies.

(B) If the minimum data for deriving tier I values are not available to meet the tier I data requirements, then a more limited data base may be considered for deriving tier II values. As with tier I, all available data shall be considered and ideally should address a range of adverse health effects with exposure over a substantial portion of the lifespan, or multiple generations, of the test species. If such data are lacking, it may be necessary to rely on less extensive data to establish a tier II value. With the use of appropriate uncertainty factors to account for a

less extensive database, the minimum data sufficient to derive a tier II value shall include a NOAEL from at least 1 well-conducted short-term repeated dose study. The study shall be conducted with animals, be of not less than 28 days duration, demonstrate a dose-response, and involve effects biologically relevant to humans. Data from studies of longer duration (more than 28 days) that may demonstrate other study conditions, as well as LOAELs from the studies (more than 28 days), may be more appropriate in some cases for derivation of tier II values. Use of a LOAEL should be based on consideration of the severity of effect, the quality of the study, and the duration of the study.

(iii) Bioaccumulation factor minimum data requirements for tier determination include the following:

(A) To be considered a tier I cancer or noncancer human health value, along with satisfying the minimum toxicity data requirements of paragraphs (i)(A) and (ii)(A) of this subdivision, an organic chemical shall meet 1 of the following bioaccumulation data requirements:

(1) A field-measured BAF.

(2) A BAF derived using the BSAF methodology.

(3) A chemical that has a BAF of less than 125 regardless of what method in subrule (5) of this rule was used to derive the BAF.

(B) To be considered a tier I cancer or noncancer human health value, along with satisfying the minimum toxicity data requirements of paragraphs (i)(A) and (ii)(A) of this subdivision, an inorganic chemical, including organometals such as mercury, shall meet 1 of the following bioaccumulative data requirements:

(1) A field-measured BAF.

(2) A laboratory-measured BCF.

(C) Cancer or noncancer human health values are considered tier II if they do not meet either the minimum toxicity data requirements of paragraphs (i)(A) and (ii)(A) of this subdivision or the minimum bioaccumulation data requirements of subparagraph (A) or (B) of this paragraph.

(b) The fundamental principles for human health cancer values development are as follows:

(i) A non-threshold mechanism of carcinogenesis shall be assumed unless biological data adequately demonstrate the existence of a threshold on a chemical-specific basis.

(ii) All appropriate human epidemiologic data and animal cancer bioassay data shall be considered. Data specific to an environmentally appropriate route of exposure shall be used. Oral exposure is preferred over dermal and inhalation exposure since, in most cases, the exposure routes of greatest concern are fish consumption and drinking water/incidental ingestion. The risk associated dose shall be set at a level corresponding to an incremental cancer risk of 1 in 100,000. If acceptable human epidemiologic data are available for a chemical, then the data shall be used to derive the risk associated dose. If acceptable human epidemiologic data are not available, then the risk associated dose shall be derived from available animal bioassay data. Data from a species that is considered most biologically relevant to humans, that is, responds most like humans, is preferred where all other considerations regarding quality of data are equal. In the absence of data to distinguish the most relevant species, data from the most sensitive species tested, that is, the species showing a carcinogenic effect at the lowest administered dose, shall generally be used.

(iii) If animal bioassay data are used and a non-threshold mechanism of carcinogenicity is assumed, then the data are fitted to a linearized multistage computer model, for example, a GLOBAL '86 or equivalent model. GLOBAL '86 is the linearized multistage model which was derived by Howe, Crump, and Van Landingham (1986), ~~which was prepared for the EPA under subcontract 2-251u-2745 to Research Triangle Institute, contract 68-01-6826, and~~ which EPA uses to determine cancer potencies (HOWE, ET AL. 1986). The upper-bound 95% confidence limit on risk, or the lower 95% confidence limit on dose, at the 1 in 100,000 risk level shall be used to calculate a risk associated dose (RAD) for individual chemicals. Other models, including

modifications or variations of the linear multistage model that are more appropriate to the available data may be used where scientifically justified.

(iv) If the duration of the study is significantly less than the natural lifespan of the test animal, then the slope may be adjusted on a case-by-case basis to compensate for latent tumors that were not expressed.

(v) A species scaling factor shall be used to account for differences between test species and humans. It shall be assumed that milligrams per surface area per day is an equivalent dose between species. All doses presented in mg/kg bodyweight will be converted to an equivalent surface area dose by raising the mg/kg dose to the 3/4 power. However, if adequate pharmacokinetic and metabolism studies are available, then these data may be factored into the adjustment for species differences on a case-by-case basis.

(vi) Additional data selection and adjustment decisions shall also be made in the process of quantifying risk. Consideration shall be given to tumor selection for modeling, that is, pooling estimates for multiple tumor types and identifying and combining benign and malignant tumors. All doses shall be adjusted to give an average daily dose over the study duration. Adjustments in the rate of tumor response shall be made for early mortality in test species. The goodness-of-fit of the model to the data shall also be assessed.

(vii) If a linear, non-threshold dose-response relationship is assumed, then the RAD shall be calculated using the following equation:

$$\text{RAD} = \frac{0.00001}{q_1^*}$$

Where:

RAD = risk associated dose in milligrams of toxicant per kilogram body weight per day (mg/kg/day).

0.00001 ( $1 \times 10^{-5}$ ) = incremental risk of developing cancer equal to 1 in 100,000.

$q_1^*$  = slope factor (mg/kg/day)<sup>-1</sup>.

(viii) If human epidemiologic data or other biological data (animal), or both, indicate that a chemical causes cancer via a threshold mechanism, then the risk associated dose may, on a case-by-case basis, be calculated using a method that assumes a threshold mechanism is operative.

(c) The fundamental principles for human health noncancer value development are as follows:

(i) Noncarcinogens shall generally be assumed to have a threshold dose or concentration below which no adverse effects should be observed. Therefore, the noncancer value is the maximum water concentration of a substance at or below which a lifetime exposure from drinking the water, consuming fish caught in the water, and ingesting water as a result of participating in water-related recreation activities is likely to be without appreciable risk of deleterious effects.

(ii) For some noncarcinogens, there may not be a threshold dose below which no adverse effects should be observed. Chemicals acting as genotoxic teratogens and germline mutagens are thought to possibly produce reproductive or developmental effects, or both, through a genetically linked mechanism that may have no threshold. Other chemicals also may not demonstrate a threshold. Values for these types of chemicals will be established on a case-by-case basis using appropriate assumptions reflecting the likelihood that no threshold exists.

(iii) All appropriate human and animal toxicologic data shall be reviewed and evaluated. To the maximum extent possible, data most specific to the environmentally relevant route of exposure shall be used. Oral exposure is preferred over dermal and inhalation exposure since, in most cases, the exposure routes of greatest concern are fish consumption and drinking water/incidental ingestion. If acceptable human epidemiologic data are not available, then animal data from species most biologically relevant to humans shall be used. In the absence of data to distinguish the most relevant species, data from the most sensitive animal species tested, that is, the species showing a toxic effect at the lowest administered dose given a relevant route of exposure should generally be used.

(iv) Minimum data requirements are specified in subdivision (a)(ii)(A) of this subrule. The experimental exposure level representing the highest level tested at which no adverse effects were demonstrated (NOAEL) from studies satisfying the minimum data requirements shall be used for value calculations. In the absence of a NOAEL, a LOAEL from studies satisfying the minimum data requirements may be used if based on relatively mild and reversible effects.

(v) Uncertainty factors shall be used to account for the uncertainties in predicting acceptable dose levels for the general human population based upon experimental animal data or limited human data. The uncertainty factors shall be determined as follows:

(A) An uncertainty factor of 1 to 10 shall be used when extrapolating from valid experimental results from studies on prolonged exposure to average healthy humans. This factor of up to tenfold is used to protect sensitive members of the human population.

(B) An uncertainty factor of 1 to 10 shall be used when extrapolating from valid results of long-term studies on experimental animals when results of studies of human exposure are not available or are inadequate. When considered with subparagraph (A) of this paragraph, a factor of up to one hundredfold is used in extrapolating data from the average animal to protect sensitive members of the human population.

(C) An uncertainty factor of 1 to 10 shall be used when extrapolating from animal studies for which the exposure duration is less than chronic, but more than subchronic (90 days or more in length), or when other significant deficiencies in study quality are present, and when useful long-term human data are not available. When considered with subparagraphs (A) and (B) of this paragraph, a factor of up to one thousandfold is used in extrapolating data from less than chronic, but more than subchronic, studies for average animals to protect sensitive members of the human population from chronic exposure.

(D) An uncertainty factor of 1 to 3 shall be used when extrapolating from animal studies for which the exposure duration is less than subchronic (less than 90 days). When considered with subparagraphs (A), (B), and (C) of this paragraph, a factor of up to 3 ~~three~~ thousandfold is used in extrapolating data from less than subchronic studies for average animals to protect sensitive members of the human population from chronic exposure.

(E) An additional uncertainty factor of 1 to 10 may be used when deriving a value from a LOAEL. The UF accounts for the lack of an identifiable NOAEL. The level of additional uncertainty applied may depend upon the severity and the incidence of the observed adverse effect.

(F) An additional uncertainty factor of 1 to 10 may be applied when there are limited effects data or incomplete subacute or chronic toxicity data, for example, reproductive/developmental data. The level of quality and quantity of the experimental data available and structure-activity relationships may be used to determine the factor selected.

(G) When deriving a UF for use in developing an HNV, the total uncertainty, as calculated following subparagraphs (A) to (F) of this paragraph, shall not exceed 10,000 for tier I values and 30,000 for tier II values.

(vi) All study results shall be converted, as necessary, to the standard unit for acceptable daily exposure of milligrams of toxicant per kilogram of body weight per day (mg/kg/day). Doses shall be adjusted for continuous exposure (7 days/week, 24 hours/day).

(vii) The acceptable daily exposure (ADE) shall be calculated as follows:

$$\text{ADE} = \frac{\text{NOAEL or LOAEL}}{\text{UF}}$$

UF

Where:

ADE = acceptable daily exposure in milligrams of toxicant per kilogram body weight per day (mg/kg/day).

NOAEL/LOAEL = the study NOAEL or LOAEL.

UF = the uncertainty factor derived in paragraph (v) of this subdivision.

(d) Human health cancer values shall be derived using the following equation:

$$HCV = \frac{RAD \times BW}{WC + [(FC_{TL3} \times BAF_3) + (FC_{TL4} \times BAF_4)]}$$

Where:

HCV = human cancer value in milligrams per liter (mg/L).

RAD = risk associated dose in milligrams toxicant per kilogram body weight per day (mg/kg/day) that is associated with a lifetime incremental cancer risk equal to 1 in 100,000 for individual chemicals.

BW = weight of an average human (BW = 70 kg).

WC<sub>d</sub> = per capita water consumption, both drinking and incidental exposure, for surface waters ~~classified as public water~~ SPECIFIED IN

R 323.1100(8) ~~supplies~~ = 2 liters/day, or

WC<sub>r</sub> = per capita incidental daily water ingestion for surface waters not ~~used as~~ SPECIFIED IN R 323.1100(8) ~~human drinking water sources~~ = 0.01 liters/day.

FC<sub>TL3</sub> = consumption of regionally caught trophic level 3 fish = 0.0036 kg/day.

FC<sub>TL4</sub> = consumption of regionally caught trophic level 4 fish = 0.0114 kg/day.

BAF<sub>3</sub> = bioaccumulation factor for trophic level 3 fish, as derived using the BAF methodology in subrule (5) of this rule.

BAF<sub>4</sub> = bioaccumulation factor for trophic level 4 fish, as derived using the BAF methodology in subrule (5) of this rule.

(e) Human noncancer values shall be derived using the following equation:

$$HNV = \frac{ADE \times BW \times RSC}{WC + [(FC_{TL3} \times BAF_3) + (FC_{TL4} \times BAF_4)]}$$

Where:

HNV = human noncancer value in milligrams per liter (mg/l).

ADE = acceptable daily exposure in milligrams toxicant per kilogram body weight per day (mg/kg/day).

RSC = relative source contribution factor of 0.8. An RSC derived from actual exposure data may be developed on a case-by-case basis.

BW = weight of an average human (BW = 70 kg).

WC<sub>d</sub> = per capita water consumption, both drinking and incidental exposure, for surface waters ~~protected as public water~~ SPECIFIED IN

R 323.1100(8) ~~supplies~~ = 2 liters/day, or

WC<sub>r</sub> = per capita incidental daily water ingestion for surface waters not ~~protected as public water~~ SPECIFIED IN R 323.1100(8) ~~supplies~~ = 0.01 liters/day.

FC<sub>TL3</sub> = consumption of regionally caught trophic level 3 fish = 0.0036 kg/day.

FC<sub>TL4</sub> = consumption of regionally caught trophic level 4 fish = 0.0114 kg/day.

BAF<sub>3</sub> = human health bioaccumulation factor for edible portion of trophic level 3 fish, as derived using the BAF methodology in subrule (5) of this rule.

BAF<sub>4</sub> = human health bioaccumulation factor for edible portion of trophic level 4 fish, as derived using the BAF methodology in subrule (5) of this rule.

- (f) Determine, on the basis of all pertinent data available, whether the human health cancer and noncancer values derived are consistent with sound scientific evidence. If they are not, the values shall be adjusted to more appropriately reflect the weight of available scientific evidence.
- (g) The tier I and tier II human health values shall be applied as monthly averages, and compliance shall be based on the average of all daily measurements taken at a site within the same calendar month.
- (h) Human health values may be modified on a site-specific basis to be more or less stringent to reflect local environmental conditions or local human exposure. Less stringent human health values shall be protective of designated uses of the surface waters of the state and shall be based on sound scientific rationale. Any such modifications shall be derived by making appropriate site-specific adjustments to the methodology in this subrule and shall be approved by the department.
- (5) Bioaccumulation factors (BAFs) used in the derivation of values in subrules (3) and (4) of this rule shall be developed according to the following process:
  - (a) Baseline BAFs shall be derived using the following 4 methods, listed in order of preference:
    - (i) A measured baseline BAF for an organic or inorganic chemical derived from a field study of acceptable quality.
    - (ii) A predicted baseline BAF for an organic chemical derived using field-measured biota-sediment accumulation factors (BSAFs) of acceptable quality.
    - (iii) A predicted baseline BAF for an organic or inorganic chemical derived from a bioconcentration factor (BCF) measured in a laboratory study of acceptable quality and a food chain multiplier (FCM).
    - (iv) A predicted baseline BAF for an organic chemical derived from an octanol-water partition coefficient ( $K_{ow}$ ) of acceptable quality and aN FCM.
  - (b) Selection of data for deriving BAFs shall be conducted as follows:
    - (i) Procedural and quality assurance requirements shall be met for field-measured BAFs as follows:
      - (A) The field studies used shall be limited to studies conducted in the Great Lakes system with fish at or near the top of the aquatic food chain (trophic levels 3 or 4 or 3 and 4).
      - (B) The trophic level of the fish species shall be determined.
      - (C) The site of the field study should not be so unique that the BAF cannot be extrapolated to other locations where the values will apply.
      - (D) For organic chemicals, the percent lipid shall be either measured or reliably estimated for the tissue used in the determination of the BAF.
      - (E) The concentration of the chemical in the water shall be measured in a way that can be related to particulate organic carbon (POC) or dissolved organic carbon (DOC), or both, and should be relatively constant during the steady-state time period.
      - (F) For organic chemicals that have a log  $K_{ow}$  of more than 4, the concentrations of POC and DOC in the ambient water shall be either measured or reliably estimated.
      - (G) For inorganic and organic chemicals, BAFs shall be used only if they are expressed on a wet weight basis. BAFs reported on a dry weight basis cannot be converted to wet weight unless a conversion factor is measured or reliably estimated for the tissue used in the determination of the BAF.
    - (ii) All of the following procedural and quality assurance requirements shall be met for field-measured BSAFs:
      - (A) The field studies used shall be limited to studies conducted in the Great Lakes system with fish at or near the top of the aquatic food chain, for example, in trophic levels 3 or 4 or 3 and 4.
      - (B) Samples of surface sediments (0 to 1 centimeters is ideal) shall be from locations in which there is net deposition of fine sediment and is representative of average surface sediment in the vicinity of the organism.
      - (C) The  $K_{ows}$  used shall be of acceptable quality as described in paragraph (v) of this subdivision.

- (D) The site of the field study should not be so unique that the resulting BAF cannot be extrapolated to other locations where the values will apply.
- (E) The trophic level of the fish species shall be determined.
- (F) The percent lipid shall be either measured or reliably estimated for the tissue used in the determination of the BAF.
- (iii) The following procedural and quality assurance requirements shall be met for laboratory-measured BCFs:
- (A) The test organism shall not be diseased, unhealthy, or adversely affected by the concentration of the chemical.
- (B) The total concentration of the chemical in the water shall be measured and should be relatively constant during the steady-state time period.
- (C) The organisms shall be exposed to the chemical using a flow-through or renewal procedure.
- (D) For organic chemicals, the percent lipid shall be either measured or reliably estimated for the tissue used in the determination of the BCF.
- (E) For organic chemicals that have a log  $K_{ow}$  of more than 4, the concentrations of POC and DOC in the test solution shall be either measured or reliably estimated.
- (F) Laboratory-measured BCFs should be determined using fish species, but BCFs determined with molluscs and other invertebrates may be used with caution. For example, because invertebrates metabolize some chemicals less efficiently than vertebrates, a baseline BCF determined for such a chemical using invertebrates is expected to be higher than a comparable baseline BCF determined using fish.
- (G) If laboratory-measured BCFs increase or decrease as the concentration of the chemical increases in the test solutions in a bioconcentration test, then the BCF measured at the lowest test concentration that is above concentrations existing in the control water shall be used. A BCF should not be calculated from a control treatment. The concentrations of an inorganic chemical in a bioconcentration test should be greater than normal background levels and greater than levels required for normal nutrition of the test species if the chemical is a micronutrient, but below levels that adversely affect the species. Bioaccumulation of an inorganic chemical might be overestimated if concentrations are at or below normal background levels due to, for example, nutritional requirements of the test organisms.
- (H) For inorganic and organic chemicals, BCFs shall be used only if they are expressed on a wet weight basis. BCFs reported on a dry weight basis cannot be converted to wet weight unless a conversion factor is measured or reliably estimated for the tissue used in the determination of the BAF.
- (I) BCFs for organic chemicals may be based on measurement of radioactivity only when the BCF is intended to include metabolites or when there is confidence that there is no interference due to metabolites.
- (J) The calculation of the BCF shall appropriately address growth dilution.
- (K) Other aspects of the methodology used should be similar to the aspects of the methodology described in the American Society for Testing and Materials (ASTM) standard entitled "Standard Guide Practice for Conducting Bioconcentration Tests with Fishes and Saltwater Bivalve Molluscs," Standard E 1022-94, (1993)(1994), WHICH IS ADOPTED BY REFERENCE IN R 323.1117.
- (iv) The following procedural and quality assurance requirements shall be met for predicted BCFs:
- (A) The  $K_{ow}$  used shall be of acceptable quality as described in paragraph (v) of this subdivision.
- (B) The predicted baseline BCF shall be calculated using the following equation:
- $$\text{Predicted baseline BCF} = K_{ow}$$
- Where:
- $K_{ow}$  = octanol-water partition coefficient.
- (v) The value of  $K_{ow}$  used for an organic chemical shall be determined by giving priority to the experimental and computational techniques used as follows:

Log K <sub>ow</sub> <4:	<u>Priority</u>	<u>Technique</u>
	1	Sslow-stir
	1	Ggenerator-column
	1	Sshake-flask
	2	Rreverse-phase liquid chromatography on C18 chromatography packing with extrapolation to 0% solvent
	3	Rreverse-phase liquid chromatography on C18 chromatography packing without extrapolation to 0% solvent
	4	Cealculated by the CLOGP program
Log K <sub>ow</sub> >4:	<u>Priority</u>	<u>Technique</u>
	1	Sslow-stir
	1	Ggenerator-column
	2	Rreverse-phase liquid chromatography on C18 chromatography packing with extrapolation to 0% solvent
	3	Rreverse-phase liquid chromatography on C18 chromatography packing without extrapolation to 0% solvent
	4	Sshake-flask
	5	Cealculated by the CLOGP program

The CLOGP program is a computer program available from Pomona College. A value of K<sub>ow</sub> that seems to be different from the others should be considered an outlier and not used. The value of K<sub>ow</sub> used for an organic chemical shall be the geometric mean of the available K<sub>ow</sub>s with highest priority or can be calculated from the arithmetic mean of the available log K<sub>ow</sub>s with the highest priority. Because it is an intermediate value in the derivation of a BAF, the value used for the K<sub>ow</sub> of a chemical shall not be rounded to fewer than 3 significant digits, and a value for log K<sub>ow</sub> shall not be rounded to fewer than 3 significant digits after the decimal point.

(c) It is assumed that BAFs and BCFs for organic chemicals can be extrapolated on the basis of percent lipid from one tissue to another and from one aquatic species to another in most cases. Because BAFs and BCFs for organic chemicals are related to the percent lipid, it does not make any difference whether the tissue sample is whole body or edible portion, but both the BAF (or BCF) and the percent lipid shall be determined for the same tissue. The percent lipid of the tissue should be measured during the BAF or BCF study, but in some cases the percent lipid can be reliably estimated from measurements on tissue from other organisms. If percent lipid is not reported for the test organisms in the original study, then it may be obtained from the author or, in the case of a laboratory study, lipid data for the same or a comparable laboratory population of test organisms that were used in the original study may be used. The lipid-normalized concentration, C<sub>ℓ</sub>, of a chemical in tissue is defined using the following equation:

$$C_{\ell} = \frac{C_B}{f_{\ell}}$$

Where:

C<sub>B</sub> = concentration of the organic chemical in the tissue of aquatic biota (either whole organism or specified tissue) (mg/g).



$f_{\ell}$  = fraction of the tissue that is lipid.

(d) By definition, baseline BAFs and BCFs for organic chemicals, whether measured or predicted, are based on the concentration of the chemical that is freely dissolved in the ambient water in order to account for bioavailability. The relationship between the total concentration of the chemical in the water, that is, that which is freely dissolved plus that which is sorbed to particulate organic carbon or to dissolved organic carbon, to the freely dissolved concentration of the chemical in the ambient water shall be calculated using the following equation:

$$C_w^{fd} = (f_{fd})(C_w^t)$$

Where:

$C_w^{fd}$  = freely dissolved concentration of the organic chemical in the ambient water;

$C_w^t$  = total concentration of the organic chemical in the ambient water;

$f_{fd}$  = fraction of the total chemical in the ambient water that is freely dissolved.

The fraction of the total chemical in the ambient water that is freely dissolved,  $f_{fd}$ , shall be calculated using the following equation:

$$f_{fd} = \frac{1}{1 + \frac{(\text{DOC})(K_{ow})}{10} + (\text{POC})(K_{ow})}$$

Where:

DOC = concentration of dissolved organic carbon, kg of dissolved organic carbon/L of water.

$K_{ow}$  = octanol-water partition coefficient of the chemical.

POC = concentration of particulate organic carbon, kg of particulate organic carbon/L of water.

(e) In the absence of a field-measured BAF or a predicted BAF derived from a BSAF, aN FCM shall be used to calculate the baseline BAF for trophic levels 3 and 4 from a laboratory-measured or predicted BCF. For an organic chemical, the FCM used shall be derived from table 9 using the chemical's log  $K_{ow}$  and linear interpolation. AN FCM of more than 1.0 applies to most organic chemicals that have a log  $K_{ow}$  of 4 or more. The trophic level used shall take into account the age or size of the fish species consumed by the human, avian, or mammalian predator because for some species of fish the young are in trophic level 3 whereas the adults are in trophic level 4.

(f) A baseline BAF shall be calculated from a field-measured BAF of acceptable quality using the following equation:

$$\text{Baseline BAF} = \left[ \frac{\text{Measured BAF}_T^t}{f_{fd}} - 1 \right] \left( \frac{1}{f_{\ell}} \right)$$

Where:

$\text{BAF}_T^t$  = BAF based on total concentration in tissue and water.

$f_{\ell}$  = fraction of the tissue that is lipid.

$f_{fd}$  = fraction of the total chemical that is freely dissolved in the ambient water.

The trophic level to which the baseline BAF applies is the same as the trophic level of the organisms used in the determination of the field-measured BAF. For each trophic level, a species mean measured baseline BAF shall be calculated as the geometric mean if more than 1 measured baseline BAF is available for a given species. For each trophic level, the geometric mean of the species mean measured baseline BAFs shall be calculated. If a baseline BAF based on a measured BAF is available for either trophic level 3 or 4, but not both, then a

measured baseline BAF for the other trophic level shall be calculated using the ratio of the FCMs that are obtained by linear interpolation from table 9 for the chemical.

(g) A baseline BAF for organic chemical "i" shall be calculated from a field-measured BSAF of acceptable quality using the following equation:

$$(\text{Baseline BAF})_i = (\text{Baseline BAF})_r \cdot \frac{(\text{BSAF})_i \cdot (K_{ow})_i}{(\text{BSAF})_r \cdot (K_{ow})_r}$$

Where:

$(\text{BSAF})_i$  = BSAF for chemical i.

$(\text{BSAF})_r$  = BSAF for the reference chemical r.

$(K_{ow})_i$  = octanol-water partition coefficient for chemical i.

$(K_{ow})_r$  = octanol-water partition coefficient for the reference chemical r.

A BSAF shall be calculated using the following equation:

$$\text{BSAF} = \frac{C_\ell}{C_{\text{soc}}}$$

Where:

$C_\ell$  = the lipid-normalized concentration of the chemical in tissue.

$C_{\text{soc}}$  = the organic carbon-normalized concentration of the chemical in sediment.

The organic carbon-normalized concentration of a chemical in sediment,  $C_{\text{soc}}$ , shall be calculated using the following equation:

$$C_{\text{soc}} = \frac{C_s}{f_{\text{oc}}}$$

Where:

$C_s$  = concentration of chemical in sediment (mg/g sediment).

$f_{\text{oc}}$  = fraction of the sediment that is organic carbon.

Predicting BAFs from BSAFs requires data from a steady-state or near steady-state condition between sediment and ambient water for both a reference chemical "r" with a field-measured  $\text{BAF}_\ell^{\text{fd}}$  and other chemicals "n=i" for which BSAFs are to be determined. The trophic level to which the baseline BAF applies is the same as the trophic level of the organisms used in the determination of the BSAF. For each trophic level, a species mean baseline BAF shall be calculated as the geometric mean if more than 1 baseline BAF is predicted from BSAFs for a given species. For each trophic level, the geometric mean of the species mean baseline BAFs derived using BSAFs shall be calculated. If a baseline BAF based on a measured BSAF is available for either trophic level 3 or 4, but not both, a baseline BAF for the other trophic level shall be calculated using the ratio of the FCMs that are obtained by linear interpolation from table 9 for the chemical.

(h) A baseline BAF for trophic level 3 and a baseline BAF for trophic level 4 shall be calculated from a laboratory-measured BCF of acceptable quality and an FCM using the following equation:

$$\text{Baseline BAF} = (\text{FCM}) \left[ \frac{\text{Measured BCF}_T^t}{f_{\text{fd}}} - 1 \right] \left( \frac{1}{f_\ell} \right)$$

Where:

$\text{BCF}_T^t$  = BCF based on total concentration in tissue and water.

$f_\ell$  = fraction of the tissue that is lipid.

$f_{\text{fd}}$  = fraction of the total chemical in the test water that is freely dissolved.

FCM = the food chain multiplier obtained from table 9 by linear interpolation for trophic level 3 or 4, as necessary.

For each trophic level, a species mean baseline BAF shall be calculated as the geometric mean if more than 1 baseline BAF is predicted from laboratory-measured BCFs for a given species. For each trophic level, the geometric mean of the species mean baseline BAFs based on laboratory-measured BCFs shall be calculated.

(i) A baseline BAF for trophic level 3 and a baseline BAF for trophic level 4 shall be calculated from a  $K_{ow}$  of acceptable quality and aN FCM using the following equation:

$$\text{Baseline BAF} = (\text{FCM})(\text{predicted baseline BCF}) = (\text{FCM})(K_{ow})$$

Where:

FCM = the food chain multiplier obtained from table 9 by linear interpolation for trophic level 3 or 4, as necessary.

$K_{ow}$  = octanol-water partition coefficient.

(j) Human health and wildlife BAFs for organic chemicals shall be derived as follows:

(i) The  $K_{ow}$  of the chemical shall be used with a POC concentration of 0.00000004 kg/l and a DOC concentration of 0.000002 kg/l to yield the fraction freely dissolved:

$$f_{fd} = \frac{1}{1 + \frac{(\text{DOC})(K_{ow})}{10} + \frac{(\text{POC})(K_{ow})}{10}}$$

$$= \frac{1}{1 + \frac{(0.000002 \text{ kg/L})(K_{ow})}{10} + \frac{(0.00000004 \text{ kg/L})(K_{ow})}{10}}$$

$$= \frac{1}{1 + (0.00000024 \text{ kg/L})(K_{ow})}$$

(ii) The human health BAF for an organic chemical shall be calculated using the following equations:

(A) For trophic level 3:

$$\text{Human health BAF}_{\text{TL } 3}^{\text{HH}} = [(\text{baseline BAF})(0.0182) + 1](f_{fd})$$

(B) For trophic level 4:

$$\text{Human health BAF}_{\text{TL } 4}^{\text{HH}} = [(\text{baseline BAF})(0.0310) + 1](f_{fd})$$

Where:

0.0182 and 0.0310 are the standardized fraction lipid values for trophic levels 3 and 4, respectively, that are used to derive human health values.

(iii) The wildlife BAF for an organic chemical shall be calculated using the following equations:

(A) For trophic level 3:

$$\text{Wildlife BAF}_{\text{TL } 3}^{\text{WL}} = [(\text{baseline BAF})(0.0646) + 1](f_{fd})$$

(B) For trophic level 4:

$$\text{Wildlife BAF}_{\text{TL } 4}^{\text{WL}} = [(\text{baseline BAF})(0.1031) + 1](f_{fd})$$

Where:

0.0646 and 0.1031 are the standardized fraction lipid values for trophic levels 3 and 4, respectively, that are used to derive wildlife values.

(k) To calculate human health and wildlife BAFs for inorganic chemicals, the baseline BAFs for trophic levels 3 and 4 are both assumed to equal the BCF determined for the chemical with fish. The FCM is assumed to be 1 for both trophic levels 3 and 4. However, aN FCM greater than 1 might be applicable to some metals, such as mercury, if, for example, an organometallic form of the metal biomagnifies. The process specified in paragraphs (i) and (ii) of this subdivision shall be followed:

(i) The human health BAFs for inorganic chemicals shall be calculated as follows:

(A) Measured BAFs and BCFs used to determine human health BAFs for inorganic chemicals shall be based on edible tissue of freshwater fish unless it is demonstrated that whole-body BAFs or BCFs are similar to edible-tissue BAFs or BCFs. BCFs and BAFs based on measurements of aquatic plants and invertebrates shall not be used in the derivation of human health values.

(B) If 1 or more field-measured baseline BAFs for an inorganic chemical are available from studies conducted in the Great Lakes system with the muscle of fish, for each trophic level, a species mean measured baseline BAF shall be calculated as the geometric mean if more than 1 measured BAF is available for a given species; and the geometric mean of the species mean measured baseline BAFs shall be used as the human health BAF for that chemical.

(C) If an acceptable measured baseline BAF is not available for an inorganic chemical and 1 or more acceptable edible-portion laboratory-measured BCFs are available for the chemical, then a predicted baseline BAF shall be calculated by multiplying the geometric mean of the BCFs times an FCM. The FCM will be 1.0 unless chemical-specific biomagnification data support using a multiplier other than 1.0. The predicted baseline BAF shall be used as the human health BAF for that chemical.

(ii) The wildlife BAFs for inorganic chemicals shall be calculated as follows:

(A) Measured BAFs and BCFs used to determine wildlife BAFs for inorganic chemicals shall be based on whole-body freshwater fish and invertebrate data unless it is demonstrated that edible-tissue BAFs or BCFs are similar to whole-body BAFs or BCFs.

(B) If 1 or more field-measured baseline BAFs for an inorganic chemical are available from studies conducted in the Great Lakes system with the whole body of fish or invertebrates, for each trophic level, a species mean measured baseline BAF shall be calculated as the geometric mean if more than 1 measured BAF is available for a given species; and the geometric mean of the species mean measured baseline BAFs shall be used as the wildlife BAF for that chemical.

(C) If an acceptable measured baseline BAF is not available for an inorganic chemical and 1 or more acceptable whole-body laboratory-measured BCFs are available for the chemical, then a predicted baseline BAF shall be calculated by multiplying the geometric mean of the BCFs times a FCM. The FCM will be 1.0 unless chemical-specific biomagnification data support using a multiplier other than 1.0. The predicted baseline BAF shall be used as the wildlife BAF for that chemical.

(l) For both organic and inorganic chemicals, human health and wildlife BAFs for both trophic levels shall be reviewed for consistency with all available data concerning the bioaccumulation, bioconcentration, and metabolism of the chemical. For example, information concerning octanol-water partitioning, molecular size, or other physicochemical properties that might enhance or inhibit bioaccumulation should be considered for organic chemicals. BAFs derived in accordance with the methodology specified in this subrule shall be modified if changes are justified by available data.

(m) BAFs may be modified on a site-specific basis to be higher or lower to reflect local environmental conditions. Any site-specific modifications shall be derived by making appropriate site-specific adjustments to the methodology in this subrule and shall be approved by the department. Lower BAFs shall be protective of designated uses of the surface waters of the state and shall be based on sound scientific rationale to address site-specific factors, including all of the following factors:

(i) The fraction of the total chemical that is freely dissolved in the ambient water is different than that used to derive the statewide BAFs.

(ii) Input parameters of the Gobas model and the disequilibrium constant are different at the site than the input parameters and the disequilibrium constant used to derive the statewide BAFs.

- (iii) The percent lipid of aquatic organisms that are consumed and occur at the site is different than the percent lipid of aquatic organisms used to derive the statewide BAFs.
- (iv) Site-specific field-measured BAFs or BSAFs are determined.
- (6) In addition to the values derived by the method set forth in subrule (2) of this rule, biological techniques, including whole effluent toxicity requirements, may be used to assure that the acute and chronic aquatic life requirements of these rules are met in the surface waters of the state.
- (7) If, ~~after the effective date of this rule,~~ new information becomes available for the department to make a determination that any of the water quality values in tables 1, 2, 4, 7, and 8 should be revised, then a rule change shall be initiated by the department to modify the values. The revised values will be considered for the purposes of developing water quality-based effluent limits for national pollutant discharge elimination system permits and appropriate adjustments shall be made when the permit is reissued.

(8) Tables 1 to 9 read as follows:

Table 1. Aquatic Maximum Values for Protection of Aquatic Life in Ambient Waters.

Chemical	AMV <sup>1</sup> (ug/L)	Conversion Factor (CF)
Arsenic <sup>2</sup>	340	1.0
Cadmium <sup>2</sup>	$(e^{1.128(\ln H)-3.6867})(CF)$	$1.136672-(\ln H)(0.041838)$
Chromium (III) <sup>2</sup>	$(e^{0.819(\ln H)+3.7256})(CF)$	0.316
Chromium (VI) <sup>2</sup>	16	0.982
Copper <sup>2</sup>	$(e^{0.9422(\ln H)-1.7})(CF)$	0.96
Cyanide <sup>3</sup>	22	n/a
Dieldrin <sup>4</sup>	0.24	n/a
Endrin <sup>4</sup>	0.086	n/a
Lindane <sup>4</sup>	0.95	n/a
Mercury <sup>2</sup>	1.4	0.85
Nickel <sup>2</sup>	$(e^{0.846(\ln H)+2.255})(CF)$	0.998
Parathion <sup>4</sup>	0.065	n/a
Pentachlorophenol <sup>4</sup>	$e^{1.005(pH)-4.869}$	n/a
Zinc <sup>2</sup>	$(e^{0.8473(\ln H)+0.884})(CF)$	0.978

<sup>1</sup>AMV is the aquatic maximum value and is equal to 1/2 the FAV. The AMV shall be rounded to 2 significant digits.

<sup>2</sup>Value is expressed as a dissolved concentration calculated using the specified conversion factor.

<sup>3</sup>Value is expressed as free cyanide.

<sup>4</sup>Value is expressed as a total concentration.

Note: The term "lnH" is the natural log of hardness, expressed as mg/L CaCO<sub>3</sub>.

The term "n/a" means not applicable.

Table 2. Chronic Water Quality Values for Protection of Aquatic Life in Ambient Waters.

Chemical	FCV <sup>1</sup> (ug/L)	Conversion Factor (CF)
Arsenic <sup>2</sup>	150	1.0
Cadmium <sup>2</sup>	$(e^{0.7852(\ln H)-2.715})(CF)$	$1.101672-(\ln H)(0.041838)$
Chromium (III) <sup>2</sup>	$(e^{0.819(\ln H)+0.6848})(CF)$	0.86
Chromium (VI) <sup>2</sup>	11	0.962
Copper <sup>2</sup>	$(e^{0.8545(\ln H)-1.702})(CF)$	0.96
Cyanide <sup>3</sup>	5.2	n/a
Dieldrin <sup>4</sup>	0.056	n/a
Endrin <sup>4</sup>	0.036	n/a
Mercury <sup>2</sup>	0.77	0.85
Nickel <sup>2</sup>	$(e^{0.846(\ln H)+0.0584})(CF)$	0.997
Parathion <sup>4</sup>	0.013	n/a
Pentachlorophenol <sup>4</sup>	$e^{1.005(\text{pH})-5.134}$	n/a
Selenium <sup>5</sup>	5	n/a
Zinc <sup>2</sup>	$(e^{0.8473(\ln H)+0.884})(CF)$	0.986

<sup>1</sup>FCV is the final chronic value. The FCV shall be rounded to 2 significant digits.

<sup>2</sup>Value is expressed as a dissolved concentration calculated using the specified conversion factor.

<sup>3</sup>Value is expressed as free cyanide.

<sup>4</sup>Value is expressed as a total concentration.

<sup>5</sup>Value is expressed as a total recoverable concentration.

Note: The term "lnH" is the natural log of hardness, as expressed in mg/L CaCO<sub>3</sub>.  
The term "n/a" means not applicable.

Table 3. Tier II Acute Factors.

Number of minimum data requirements satisfied	Acute Factor
2.....	13.0
3.....	8.0
4.....	7.0
5.....	6.1
6.....	5.2
7.....	4.3

Table 4. Water Quality Values for Protection of Wildlife.

Chemical	Wildlife Value (ug/L)
DDT and metabolites .....	0.000011
Mercury, including methylmercury .....	0.0013
PCBs (class).....	0.00012
2,3,7,8-TCDD .....	0.0000000031



Table 5. Bioaccumulative Chemicals of Concern

Chlordane  
 4,4'-DDD  
 4,4'-DDE  
 4,4'-DDT  
 Dieldrin  
 Hexachlorobenzene  
 Hexachlorobutadiene  
 Hexachlorocyclohexanes  
 alpha-Hexachlorocyclohexane  
 beta-Hexachlorocyclohexane  
 delta-Hexachlorocyclohexane  
 Lindane  
 Mercury  
 Mirex  
 Octachlorostyrene  
 Polychlorinated biphenyls (PCBs)  
 Pentachlorobenzene  
 Photomirex  
 2,3,7,8-TCDD  
 1,2,3,4-Tetrachlorobenzene  
~~1,2,4,5-Tetrachlorobenzene~~ 1,2,4,5-TETRACHLOROBENZENE  
 Toxaphene

Table 6. Exposure Parameters for the 5 Representative Species Identified for Protection.

Species	Adult Body Weight	Water Ingestion Rate	Food Ingestion Rate of Prey In Each Trophic Level	Trophic Level of Prey
Units	kg	L/day	kg/day	Percent of diet
Mink	0.80	0.081	TL3: 0.159 Other: 0.0177	TL3: 90 % Other: 10 %
Otter	7.4	0.600	TL3: 0.977 TL4: 0.244	TL3: 80 % TL4: 20 %
Kingfisher	0.15	0.017	TL3: 0.0672	TL3: 100 %
Herring gull	1.1	0.063	TL3: 0.192 TL4: 0.0480 Other: 0.0267	<u>Fish: 90 %</u> TL3: 80 % TL4: 20 %  <u>Other: 10 %</u>
Bald eagle	4.6	0.160	TL3: 0.371 TL4: 0.0929 PB: 0.0283 Other: 0.0121	<u>Fish: 92 %</u> TL3: 80 % TL4: 20 %  <u>Birds: 8 %</u> PB: 70 % Non-aquatic: 30 %

Note: TL3 = trophic level 3 fish.

TL4 = trophic level 4 fish.

PB = piscivorous birds.

Other = nonaquatic birds and mammals.

Table 7. Human Noncancer Values for Protection of Human Health.

Chemical	HNV (ug/L)	
	Nondrinking	Drinking
Benzene.....	19 .....	510
Chlordane.....	0.0014 .....	0.0014
Chlorobenzene.....	470 .....	3200
Cyanides .....	600 .....	48000
DDT.....	0.002 .....	0.002
Dieldrin.....	0.00041 .....	0.00041
2,4-dimethylphenol .....	450 .....	8700
2,4-dinitrophenol .....	55 .....	2800
Hexachlorobenzene.....	0.046 .....	0.046
Hexachloroethane .....	6.0 .....	7.6
Lindane .....	0.47 .....	0.50
Mercury (including methylmercury).....	0.0031 0.0018 .....	0.0031 0.0018
Methylene chloride.....	1600 .....	90000
2,3,7,8-TCDD .....	0.000000067 .....	0.000000067
Toluene .....	5600 .....	51000

Table 8. Human Cancer Values for the Protection of Human Health.

Chemical	HCV (ug/L)	
	Nondrinking	Drinking
Benzene.....	12 .....	310
Chlordane.....	0.00025 .....	0.00025
DDT.....	0.00015 .....	0.00015
Dieldrin.....	0.0000065 .....	0.0000065
Hexachlorobenzene.....	0.00045 .....	0.00045
Hexachloroethane .....	5.3 .....	6.7
Methylene chloride.....	47 .....	2600
PCBs (class).....	0.000026 .....	0.000026
2,3,7,8-TCDD .....	0.0000000086 .....	0.0000000086
Toxaphene.....	0.000068 .....	0.000068
Trichloroethylene .....	29 .....	370

Table 9. Food Chain Multipliers for Trophic Levels 2, 3, &amp; AND 4.

Log K <sub>ow</sub>	Trophic Level 2	Trophic <sup>a</sup> Level 3	Trophic Level 4
2.0.....	1.000.....	1.005.....	1.000
2.5.....	1.000.....	1.010.....	1.002
3.0.....	1.000.....	1.028.....	1.007
3.1.....	1.000.....	1.034.....	1.007
3.2.....	1.000.....	1.042.....	1.009
3.3.....	1.000.....	1.053.....	1.012
3.4.....	1.000.....	1.067.....	1.014
3.5.....	1.000.....	1.083.....	1.019
3.6.....	1.000.....	1.103.....	1.023
3.7.....	1.000.....	1.128.....	1.033
3.8.....	1.000.....	1.161.....	1.042
3.9.....	1.380.....	1.130.....	1.054
4.3.....	1.000.....	1.491.....	1.178
4.4.....	1.000.....	1.614.....	1.242
4.5.....	1.000.....	1.766.....	1.334
4.6.....	1.000.....	1.950.....	1.459
4.7.....	1.000.....	2.175.....	1.633
4.8.....	1.000.....	2.452.....	1.871
4.9.....	1.000.....	2.780.....	2.193
5.0.....	1.000.....	3.181.....	2.612
5.1.....	1.000.....	3.643.....	3.162
5.2.....	1.000.....	4.188.....	3.873
5.3.....	1.000.....	4.803.....	4.742
5.4.....	1.000.....	5.502.....	5.821
5.5.....	1.000.....	6.266.....	7.079
5.6.....	1.000.....	7.096.....	8.551
5.7.....	1.000.....	7.962.....	10.209
5.8.....	1.000.....	8.841.....	12.050
5.9.....	1.000.....	9.716.....	13.964
6.0.....	1.000.....	10.556.....	15.996
6.1.....	1.000.....	11.337.....	17.783
6.2.....	1.000.....	12.064.....	19.907
6.3.....	1.000.....	12.691.....	21.677
6.4.....	1.000.....	13.228.....	23.281
6.5.....	1.000.....	13.662.....	24.604
6.6.....	1.000.....	13.980.....	25.645
6.7.....	1.000.....	14.223.....	26.363
6.8.....	1.000.....	14.355.....	26.669
6.9.....	1.000.....	14.388.....	26.669
7.0.....	1.000.....	14.305.....	26.242

7.1.....	1.000.....	14.142.....	25.468
7.2.....	1.000.....	13.852.....	24.322
7.3.....	1.000.....	13.474.....	22.856
7.4.....	1.000.....	12.987.....	21.038
7.5.....	1.000.....	12.517.....	18.967
7.6.....	1.000.....	11.708.....	16.749
7.7.....	1.000.....	10.914.....	14.388
7.8.....	1.000.....	10.069.....	12.050
7.9.....	1.000.....	9.162.....	9.840
8.0.....	1.000.....	8.222.....	7.798
8.1.....	1.000.....	7.278.....	6.012
8.2.....	1.000.....	6.361.....	4.519
8.3.....	1.000.....	5.489.....	3.311
8.4.....	1.000.....	4.683.....	2.371
8.5.....	1.000.....	3.949.....	1.663
8.6.....	1.000.....	3.296.....	1.146
8.7.....	1.000.....	2.732.....	0.778
8.8.....	1.000.....	2.246.....	0.521
8.9.....	1.000.....	1.837.....	0.345
9.0.....	1.000.....	1.493.....	0.226

<sup>a</sup> The FCMs for trophic level 3 are the geometric mean of the FCMs for sculpin and alewife.

### **R 323.1060 Plant nutrients.**

Rule 60. (1) Consistent with Great Lakes protection, phosphorus which is or may readily become available as a plant nutrient shall be controlled from point source discharges to achieve 1 milligram per liter of total phosphorus as a maximum monthly average effluent concentration unless other limits, either higher or lower, are deemed necessary and appropriate by the ~~commission~~ DEPARTMENT.

(2) In addition to the protection provided under subrule (1) of this rule, nutrients shall be limited to the extent necessary to prevent stimulation of growths of aquatic rooted, attached, suspended, and floating plants, fungi or bacteria which are or may become injurious to the designated uses of the SURFACE waters of the state.

### **R 323.1062 Microorganisms.**

Rule 62. (1) All SURFACE waters of the state protected for total body contact recreation shall not contain more than 130 Escherichia coli (E. coli) per 100 milliliters, as a 30-day geometric mean. Compliance shall be based on the geometric mean of all individual samples taken during 5 or more sampling events representatively spread over a 30-day period. Each sampling event shall consist of 3 or more samples taken at representative locations within a defined sampling area. At no time shall the SURFACE waters of the state protected for total body contact recreation contain more than a maximum of 300 E. coli per 100 milliliters. Compliance shall be based on the geometric mean of 3 or more samples taken during the same sampling event at representative locations within a defined sampling area.

(2) All SURFACE waters of the state protected for partial body contact recreation shall not contain more than a maximum of 1,000 E. coli per 100 milliliters. Compliance shall be based on the geometric mean of 3 or more samples, taken during the same sampling event, at representative locations within a defined sampling area.

(3) Discharges containing treated or untreated human sewage shall not contain more than 200 fecal coliform bacteria per 100 milliliters, based on the geometric mean of all of 5 or more samples taken over a 30-day period, nor more than 400 fecal coliform bacteria per 100 milliliters, based on the geometric mean of all of 3 or more samples taken during any period of discharge not to exceed 7 days. Other indicators of adequate disinfection may be utilized where approved by the department.

(4) The department may suspend the provisions of subrule (3) of this rule, for the purpose of discharge permit issuance, from November 1 to April 30, upon an adequate demonstration by the applicant that designated uses will be protected. At a minimum, the provisions of subrule (2) of this rule shall be met.

(5) Acceptable levels of infectious organisms that are not specifically addressed by the provisions of subrules (1), (2), and (3) of this rule shall be established by the department on a case-by-case basis to assure that designated uses are protected.

### **R 323.1064 Dissolved oxygen in Great Lakes, connecting waters, and inland streams.**

Rule 64. (1) A minimum of 7 milligrams per liter of dissolved oxygen in all Great Lakes and connecting waterways shall be maintained, and, except for inland lakes as prescribed in R 323.1065, a minimum of 7 milligrams per liter of dissolved oxygen shall be maintained at all times in all inland waters designated by these rules to be protected for coldwater AQUATIC LIFE fish. In all other waters, except for inland lakes as prescribed by R 323.1065, a minimum of 5 milligrams per liter of dissolved oxygen shall be maintained. These standards do not apply for a limited warmwater AQUATIC LIFE fishery use subcategory or limited coldwater AQUATIC LIFE fishery use subcategory established pursuant to R 323.1100(10)(11) or during those periods when the standards specified in subrule (2) of this rule apply.

(2) SURFACE Wwaters of the state which do not meet the standards set forth in subrule (1) of this rule shall be upgraded to meet those standards. THE DEPARTMENT MAY ISSUE PERMITS PURSUANT TO R 323.2145 WHICH ESTABLISH SCHEDULES TO ACHIEVE THE STANDARDS SET FORTH IN SUBRULE (1) OF THIS RULE FOR POINT SOURCE DISCHARGES TO SURFACE WATERS WHICH DO NOT MEET THE STANDARDS SET FORTH IN SUBRULE (1) OF THIS RULE AND WHICH COMMENCED DISCHARGE BEFORE DECEMBER 2, 1986. ~~For existing point source discharges to these waters, the commission may issue permits pursuant to R 323.2145 which establish schedules to achieve the standards set forth in subrule (1) of this rule.~~ FOR POINT SOURCE DISCHARGES WHICH COMMENCED BEFORE DECEMBER 2, 1986, IF THE existing point source dischargers MAY demonstrate to the ~~commission~~ DEPARTMENT that the dissolved oxygen standards specified in subrule (1) of this rule are not attainable through further feasible and prudent reductions in their discharges or that the diurnal variation between the daily average and daily minimum dissolved oxygen concentrations in those waters exceeds 1 milligram per liter, further reductions in oxygen-consuming substances from such discharges will not be required, except as necessary to meet the interim standards specified in this subrule, until comprehensive plans to upgrade these waters to the standards specified in subrule (1) of this rule have been approved by the ~~commission~~ DEPARTMENT and orders, permits, or other actions necessary to implement the approved plans have been issued by the ~~commission~~ DEPARTMENT. In the interim, all of the following standards apply:

(a) For SURFACE waters of the state designated for use for coldwater AQUATIC LIFE fish, except for inland lakes as prescribed in R 323.1065, the dissolved oxygen shall not be lowered below a minimum of 6 milligrams per liter at the design flow during the warm weather season in accordance with R 323.1090(3)(2) and (4)(3). At the design flows during other seasonal periods, as provided in R 323.1090(4)(3), a minimum of 7 milligrams per liter shall be maintained. At flows greater than the design flows, dissolved oxygen shall be higher than the respective minimum values specified in this subdivision.

(b) For SURFACE waters of the state designated for use for warmwater ~~fish~~ AQUATIC LIFE ~~and other aquatic life~~, except for inland lakes as prescribed in R 323.1065, the dissolved oxygen shall not be lowered below a minimum of 4 milligrams per liter, or below 5 milligrams per liter as a daily average, at the design flow during the warm weather season in accordance with R 323.1090(3)(2) and (4)(3). At the design flows during other seasonal periods as provided in R 323.1090(4)(3), a minimum of 5 milligrams per liter shall be maintained. At flows greater than the design flows, dissolved oxygen shall be higher than the respective minimum values specified in this subdivision.

(c) For SURFACE waters of the state designated for use for warmwater AQUATIC LIFE ~~fish and other aquatic life~~, but also designated as principal migratory routes for anadromous salmonids, except for inland lakes as prescribed in R 323.1065, the dissolved oxygen shall not be lowered below 5 milligrams per liter as a minimum during periods of migration.

(3) The DEPARTMENT ~~commission~~ may cause a comprehensive plan to be prepared to upgrade waters to the standards specified in subrule (1) of this rule taking into consideration all factors affecting dissolved oxygen in these waters and the cost effectiveness of control measures to upgrade these waters and, after notice and hearing, approve the plan. After notice and hearing, the DEPARTMENT ~~commission~~ may amend a comprehensive plan for cause. In undertaking the comprehensive planning effort the DEPARTMENT ~~commission~~ shall provide for and encourage participation by interested and impacted persons in the affected area. Persons directly or indirectly discharging substances which contribute towards these waters not meeting the standards specified in subrule (1) of this rule may be required after notice and order to provide necessary information to assist in the development or amendment of the comprehensive plan. Upon notice and order, permit, or other action of the DEPARTMENT ~~commission~~, persons directly or indirectly discharging substances which contribute toward these waters not meeting the standards specified in subrule (1) of this rule shall take the necessary actions consistent with the approved comprehensive plan to control these discharges to upgrade these waters to the standards specified in subrule (1) of this rule.

### **R 323.1065 Dissolved oxygen; inland lakes.**

Rule 65. (1) The following standards for dissolved oxygen shall apply to THE lakes designated as trout lakes by the natural resources commission or lakes listed in the publication entitled "Coldwater Lakes of Michigan": FOR COLDWATER AQUATIC LIFE IN R 323.1100(4) AND (6):

(a) In stratified coldwater lakes which have dissolved oxygen CONCENTRATIONS ~~concentrations~~ less than 7 milligrams per liter in the upper half of the hypolimnion, a minimum of 7 milligrams per liter dissolved oxygen shall be maintained throughout the epilimnion and upper 1/3 of the thermocline during stratification. Lakes capable of sustaining oxygen throughout the hypolimnion shall maintain oxygen throughout the hypolimnion. At all other times, dissolved oxygen concentrations greater than 7 milligrams per liter shall be maintained.

(b) Except for lakes described in subdivision (c) of this subrule, in stratified coldwater lakes which have dissolved oxygen concentrations greater than 7 milligrams per liter in the upper half of the hypolimnion, a minimum of 7 milligrams per liter of dissolved oxygen shall be maintained in the epilimnion, thermocline, and upper half of the hypolimnion. Lakes capable of sustaining oxygen throughout the hypolimnion shall maintain oxygen throughout the hypolimnion. At all other times, dissolved oxygen concentrations greater than 7 milligrams per liter shall be maintained.

(c) In stratified coldwater lakes which have dissolved oxygen concentrations greater than 7 milligrams per liter throughout the hypolimnion, a minimum of 7 milligrams per liter shall be maintained throughout the lake.

(d) In unstratified coldwater lakes, a minimum of 7 milligrams per liter of dissolved oxygen shall be maintained throughout the lake.

(2) For all other inland lakes not specified in subrule (1) of this rule, during stratification, a minimum dissolved oxygen concentration of 5 milligrams per liter shall be maintained throughout the epilimnion. At all other times, dissolved oxygen concentrations greater than 5 milligrams per liter shall be maintained.

### **R 323.1069 Temperature; general considerations.**

Rule 69. (1) In all SURFACE waters of the state, the points of temperature measurement normally shall be in the surface 1 meter; however, where turbulence, sinking plumes, discharge inertia or other phenomena upset the natural thermal distribution patterns of receiving waters, temperature measurements shall be required to identify the spatial characteristics of the thermal profile.

(2) Monthly maximum temperatures, based on the ninetieth percentile occurrence of natural water temperatures plus the increase allowed at the edge of the mixing zone and in part on long-term physiological needs of fish, may be exceeded for short periods when natural water temperatures exceed the ninetieth percentile occurrence. Temperature increases during these periods may be permitted by the DEPARTMENT ~~commission~~, but in all cases shall not be greater than the natural water temperature plus the increase allowed at the edge of the mixing zone.

(3) Natural daily and seasonal temperature fluctuations of the receiving waters shall be preserved.

### **R 323.1075 Temperature of rivers, streams, and impoundments.**

Rule 75. (1) Rivers, streams, and impoundments naturally capable of supporting coldwater AQUATIC LIFE ~~fish~~ shall not receive a heat load which would do either of the following:

- (a) Increase the temperature of the receiving waters at the edge of the mixing zone more than 2 degrees Fahrenheit above the existing natural water temperature.
- (b) Increase the temperature of the receiving waters at the edge of the mixing zone to temperatures greater than the following monthly maximum temperatures:

J	F	M	A	M	J	J	A	S	O	N	D
38	38	43	54	65	68	68	68	63	56	48	40

(2) Rivers, streams, and impoundments naturally capable of supporting warmwater AQUATIC LIFE ~~fish~~ shall not receive a heat load which would warm the receiving water at the edge of the mixing zone more than 5 degrees Fahrenheit above the existing natural water temperature.

(3) Rivers, streams, and impoundments naturally capable of supporting warmwater AQUATIC LIFE ~~fish~~ shall not receive a heat load which would warm the receiving water at the edge of the mixing zone to temperatures greater than the following monthly maximum temperatures:

(a) For rivers, streams, and impoundments north of a line between Bay City, Midland, Alma, and North Muskegon:

J	F	M	A	M	J	J	A	S	O	N	D
38	38	41	56	70	80	83	81	74	64	49	39

(b) For rivers, streams, and impoundments south of a line between Bay City, Midland, Alma, and North Muskegon, except the St. Joseph river:

J	F	M	A	M	J	J	A	S	O	N	D
41	40	50	63	76	84	85	85	79	68	55	43



(c) St. Joseph river:

J	F	M	A	M	J	J	A	S	O	N	D
50	50	55	65	75	85	85	85	85	70	60	50

(4) Non-trout rivers and streams that serve as principal migratory routes for anadromous salmonids shall not receive a heat load during periods of migration at such locations and in a manner which may adversely affect salmonid migration or raise the receiving water temperature at the edge of the mixing zone more than 5 degrees Fahrenheit above the existing natural water temperature.

### **R 323.1082 Mixing zones.**

Rule 82. (1) A mixing zone is that portion of a water body allocated by the department where a point source or venting groundwater discharge is mixed with the surface waters of the state. Exposure in mixing zones shall not result in deleterious effects to populations of aquatic life or wildlife. As a minimum restriction, the final acute value (FAV) for aquatic life shall not be exceeded when determining a wasteload allocation (WLA) for acute aquatic life protection, unless it is determined by the department that a higher level is acceptable or it can be demonstrated to the department that an acute mixing zone is acceptable consistent with subrule (7) of this rule. The mixing zone shall not prevent the passage of fish or fish food organisms in a manner that would result in adverse impacts on the immediate or future populations of the fish or fish food organisms. ~~A watercourse or portions of a watercourse that without 1 or more point source discharges, would have no flow except during periods of surface runoff may be considered as a mixing zone for a point source discharge.~~ The area of mixing zones shall be minimized. To this end, devices for rapid mixing, dilution, and dispersion are encouraged where practicable.

A WATERCOURSE OR PORTIONS OF A WATERCOURSE THAT, WITHOUT 1 OR MORE POINT SOURCE DISCHARGES, WOULD HAVE NO FLOW EXCEPT DURING PERIODS OF SURFACE RUNOFF MAY BE CONSIDERED AS A MIXING ZONE FOR A POINT SOURCE DISCHARGE. A MIXING ZONE ESTABLISHED IN THIS MANNER SHALL NOT APPLY TO POLLUTANTS OF INITIAL FOCUS SPECIFIED IN 40 CFR 132 (1995) UNLESS A SITE SPECIFIC DETERMINATION UNDER R 323.1057(2) HAS BEEN CONDUCTED THAT SHOWS THAT THE EXISTING AND EXPECTED AQUATIC LIFE IN THE WATERCOURSE WILL BE ADEQUATELY PROTECTED IN THE ABSENCE OF CHRONIC AQUATIC LIFE WATER QUALITY VALUES.

(2) Unless otherwise stated in this rule, not more than 25% of the receiving water design flow for lotic systems, as stated in R 323.1090(2), shall be used when determining a ~~WLA~~ **WHOLE EFFLUENT TOXICITY LIMIT** OR A WASTELOAD ALLOCATION FOR A TOXIC SUBSTANCE, in the absence of, or consistent with, a total maximum daily load, ~~for a toxic substance or a whole effluent toxicity (WET) limit,~~ unless it can be demonstrated to the department that the use of a larger volume is acceptable consistent with subrule (7) of this rule.

(3) For ammonia and substances not included in subrule (2) of this rule, the design flow for lotic systems, as stated in R 323.1090(2)(a) or (3), shall be used when determining WLAs if the provisions in subrule (1) of this rule are met, unless the department determines that a more restrictive volume is necessary.

(4) For all substances, physical mixing zone boundaries may be established and shall be determined by the department on a case-by-case basis.

(5) Mixing zones in the Great Lakes and inland lakes for the purpose of determining WLAs and WET limits shall assume no greater dilution than 1 part effluent to 10 parts receiving water, unless it can be demonstrated to the department that use of a larger volume is acceptable consistent with subrule (7) of this rule. EXCEPT FOR AMMONIA, a larger mixing zone shall not be granted if it exceeds the area where discharge-induced mixing occurs. Mixing zones established under this subrule for thermal discharges to meet the Great Lakes and inland lake requirements of R 323.1069, R 323.1070, R 323.1072, R 323.1073, and R 323.1075 shall be determined by the department on a case-by-case basis.

(6) In addition to subrules (1), (2), (4), and (5) of this rule, the following provisions are applicable to bioaccumulative chemicals of concern (BCCs) when establishing WLAs:

(a) There shall be no mixing zones available for new discharges of BCCs to the surface waters of the state.

(b) Mixing zones for BCCs may be allowed for existing discharges to the surface waters of the state through NOVEMBER 14, 2010 ~~March 23, 2007~~, pursuant to the provisions of this rule. After this date, except as provided in subdivisions (c) and (d) of this subrule, permits shall not authorize mixing zones for existing discharges of BCCs to the surface waters of the state, and WLAs for such discharges shall be set equal to the most stringent water quality value for that BCC.

(c) The department may grant mixing zones for any existing discharge of BCCs to the surface waters of the state where it can be demonstrated, on a case-by-case basis, that failure to grant a mixing zone would preclude water conservation measures that would lead to overall load reductions in BCCs.

(d) Upon the request of an existing discharger of a BCC to the surface waters of the state, the department may grant mixing zones beyond NOVEMBER 14, 2010 ~~March 23, 2007~~, based upon technical and economic considerations, subject to all of the following provisions:

(i) The department must determine that all of the following provisions are satisfied:

(A) The discharger is in compliance with, and will continue to implement, all applicable technology-based treatment and pretreatment requirements of the clean water act of 1972, as amended, 33 U.S.C. §§301, 302, 304, 306, 307, 401, and 402, and is in compliance with its existing NPDES WQBELs, including those based on a mixing zone.

(B) The discharger has reduced, and will continue to reduce, to the maximum extent possible, the loading of the BCC for which a mixing zone is requested, by the use of cost-effective controls or pollution-prevention alternatives that have been adequately demonstrated and are reasonably available to the discharger.

(C) The discharger has evaluated alternative means of reducing the BCC elsewhere in the watershed.

(ii) In making the determination in paragraph (i) of this subdivision, the department shall consider all of the following factors:

(A) The availability and feasibility, including cost effectiveness, of additional controls or pollution prevention measures for reducing and ultimately eliminating BCCs for the discharger, including additional controls or pollution prevention measures used by similar dischargers for reducing and ultimately eliminating BCCs.

(B) Whether the discharger or affected communities will suffer unreasonable economic effects if the mixing zone is eliminated.

(C) The extent to which the discharger will implement an ambient monitoring plan to ensure compliance with water quality values at the edge of any authorized mixing zone.

(D) Other information the department deems appropriate.

(iii) Any exceptions to the mixing zone elimination provision for existing discharges of BCCs granted pursuant to this subdivision shall comply with all of the following provisions:

(A) Not result in any less stringent limitations than the limitations that existed on JULY 29, 1997 ~~the effective date of these rules~~.

(B) Be limited to 1 permit term unless the department makes a new determination in accordance with this subrule for each successive permit application in which a mixing zone for the BCC is sought.

(C) Not likely jeopardize the continued existence of any endangered or threatened species listed or proposed under section 4 of the endangered species act or result in the destruction or adverse modification of the species' critical habitat.

(iv) For each draft NPDES permit that allows a mixing zone for a BCC after NOVEMBER 14, 2010 ~~March 23, 2007~~, the NPDES fact sheet shall specify relevant information used to establish the mixing zone, including the mixing provisions used in calculating the permit limits and the identity of each BCC for which a mixing zone is proposed.

(7) For purposes of establishing a mixing zone other than as specified in subrules (1), (2), and (5) of this rule, a mixing zone demonstration shall be submitted to the department for approval and all of the following provisions apply:

(a) The mixing zone demonstration shall include all of the following:

(i) A description of the amount of dilution occurring at the boundaries of the proposed mixing zone and the size, shape, and location of the area of mixing, including the manner in which diffusion and dispersion occur.

(ii) For sources discharging to the Great Lakes and inland lakes, a definition of the location at which discharge-induced mixing ceases.

(iii) Documentation of the substrate character within the mixing zone.

(iv) Confirmation that the mixing zone does not interfere with or block the passage of fish or aquatic life.

(v) Confirmation that the mixing zone would not likely jeopardize the continued existence of any endangered or threatened species listed or proposed under section 4 of the endangered species act or result in the destruction or adverse modification of the species' critical habitat.

(vi) Confirmation that the mixing zone does not extend to A PUBLIC WATER SUPPLY SOURCE PURSUANT TO R 323.1100(8) ~~drinking water intakes~~.

(vii) Confirmation that the mixing zone would not interfere with the designated or existing uses of the receiving water or downstream waters.

(viii) Documentation of background water quality concentrations.

(ix) Confirmation that the mixing zone does not promote undesirable aquatic life or result in a dominance of nuisance species.

(x) Confirmation that, by allowing additional mixing/dilution, the following will not occur:

(A) The formation of objectionable deposits.

(B) The concentration of floating debris, oil, scum, and other matter in concentrations that form nuisances.

(C) The production of objectionable color, odor, taste, or turbidity.

(b) The mixing zone demonstration shall also address all of the following items:

(i) Whether or not adjacent mixing zones overlap.

(ii) Whether organisms would be attracted to the area of mixing as a result of the effluent character.

(iii) Whether the habitat supports endemic or naturally occurring species.

(iv) Why an increased mixing zone is necessary.

(v) Describe any pollution prevention measures that were evaluated to eliminate the need for an increased mixing zone.

(c) The mixing zone demonstration shall be based on the assumption that environmental fate or other physical, chemical, or biological factors do not affect the concentration of the toxic substance in the water column, within the proposed mixing zone, unless both of the following occur:

(i) Scientifically valid field studies or other relevant information demonstrate that degradation of the toxic substance is expected to occur during typical environmental conditions expected to be encountered.

(ii) Scientifically valid field studies or other relevant information address other factors that affect the level of toxic substances in the water column, including all of the following factors:

- (A) Sediment release or resuspension.
- (B) Chemical speciation.
- (C) Biological and chemical transformation.

**R 323.1090 Applicability of water quality standards.**

Rule 90. (1) The requirements prescribed by these rules shall not apply within mixing zones, except for the requirements prescribed in R 323.1050, or as otherwise specified by these rules.

(2) Water quality standards prescribed by these rules are minimally acceptable water quality conditions and shall apply at all flows equal to or exceeding the design flows, except where the department determines that a more restrictive design flow is necessary. The design flows in lotic systems shall be as follows:

(a) Unless otherwise stated in this rule, the design flow is equal to the lowest of the 12 monthly 95% exceedance flows. The 95% exceedance flow is the flow equal to or exceeded 95% of the time for the specified month.

(b) For human health values, the design flow is equal to the harmonic mean flow.

(c) For wildlife values, the design flow is equal to the 90-day, 10-year LOW flow (90Q10).

(3) A maximum of 4 seasonal design flows may be granted when determining surface water ~~discharge~~ effluent limitations for ammonia or substances not addressed by R 323.1057 if it is determined by the department that the use of such design flows will protect water quality and be consistent with the protection of the public health, safety, and welfare. The seasonal design flows shall be the lowest of the monthly 95% exceedance flow for the months in each season.

(4) Alternate design flows may be used for intermittent wet weather discharges as necessary to protect the designated uses of the receiving water.

**R 323.1092 Applicability of water quality standards to dredging or construction activities.**

Rule 92. Unless the DEPARTMENT ~~commission~~ determines, after consideration of dilution and dispersion, that such activities result in unacceptable adverse impacts on designated uses, the water quality standards prescribed by these rules shall not apply to dredging or construction activities within the SURFACE waters of the state where such activities occur or during the periods of time when the aftereffects of dredging or construction activities degrade water quality within such waters of the state, if the dredging operations or construction activities have been authorized by the United States army corps of engineers or the department ~~of natural resources~~. The water quality standards shall apply, however, in nonconfined SURFACE waters of the state utilized for the disposal of spoil from dredging operations, except within spoil disposal sites specifically defined by the United States army corps of engineers or the department ~~of natural resources~~.

**R 323.1096 Determinations of compliance with water quality standards.**

Rule 96. Analysis of the SURFACE waters of the state to determine compliance with the water quality standards prescribed by these rules shall be made pursuant to procedures outlined in 40 C.F.R. §136 (2000)(1999), WHICH ARE ADOPTED BY REFERENCE IN R 323.1117 ~~as amended by F.R. pp. 43234 to 43442, October 26, 1984, and F.R. pp. 690 to 697, January 4, 1985, or pursuant to other methods prescribed or approved by the commission~~ DEPARTMENT. ~~and the United States environmental protection agency.~~

**R 323.1097 Materials applications not subject to standards.**

Rule 97. The application of materials for water resource management projects pursuant to state statutory provisions is not subject to the standards prescribed by these rules, but all projects shall be reviewed and approved by the DEPARTMENT ~~commission~~ before application.

**R 323.1100 Designated uses.**

Rule 100. (1) At a minimum, all surface waters of the state are designated ~~for~~, and ~~shall be~~ protected ~~for~~, all of the following uses:

- (a) Agriculture.
- (b) Navigation.
- (c) Industrial water supply.
- ~~(d) Public water supply at the point of water intake.~~
- (D)(e) Warmwater AQUATIC LIFE fishery.
- (E)(f) ~~Other indigenous aquatic life and W~~wildlife.
- (F)(g) Partial body contact recreation.
- (G) FISH CONSUMPTION.

(2) All surface waters of the state are designated ~~for~~, and ~~shall be~~ protected ~~for~~, total body contact recreation from May 1 to October 31 in accordance with the provisions of R 323.1062. Total body contact recreation immediately downstream of wastewater discharges, areas of significant urban runoff, combined sewer overflows, and areas influenced by certain agricultural practices is contrary to prudent public health and safety practices, even though water quality standards may be met.

(3) If designated uses are interrupted due to uncontrollable circumstances during or following flood conditions, accidental spillages, or other emergencies, then notice shall be served upon entities affected by the interruption in accordance with procedures established by the department. Prompt corrective action shall be taken by the discharger to restore the designated uses.

(4) All inland lakes identified in the publication entitled "Coldwater Lakes of Michigan," as published in 1976 by the department of natural resources, are designated AND PROTECTED ~~for~~, and ~~shall be~~ protected ~~as~~, coldwater AQUATIC LIFE fisheries.

(5) All Great Lakes and their connecting waters, except for the entire Keweenaw waterway, including Portage lake, Houghton county, and Lake St. Clair, are designated ~~for~~, and ~~shall be~~ protected FOR ~~as~~, coldwater AQUATIC LIFE fisheries.

(6) All lakes listed in the publication entitled "Designated Trout Lakes and Regulations," issued September 10 14, 1998 ~~1996~~, by the director of the department of natural resources under the authority of part 411 of Act No. 451 of the Public Acts of 1994, ~~as amended, being §§ 1994 PA 451, MCL 324.41101 ET. SEQ. to 324.41105 of the Michigan Compiled Laws,~~ are designated, and ~~shall be~~ protected FOR ~~as~~, coldwater AQUATIC LIFE.

(7) All waters listed in the publication entitled "Designated Trout Streams for the State of Michigan," Director's Order No. DFI-101.97, by the director of the department of natural resources under the authority of section 48701(m) of Act No. 451 of the Public Acts of 1994, ~~as amended, being § 1994 PA 451, MCL 324.48701(m) of the Michigan Compiled Laws,~~ are designated AND PROTECTED ~~for~~, and ~~shall be~~ protected ~~as~~, coldwater AQUATIC LIFE fisheries.

(8) All surface waters of the state that are IDENTIFIED IN THE PUBLICATION "PUBLIC WATER SUPPLY INTAKES IN MICHIGAN," DATED AUGUST 24, 1998, ARE DESIGNATED AND PROTECTED AS PUBLIC WATER SUPPLY SOURCES ~~designated by the department as existing or proposed for use as public water supply sources are protected for such use at the point of water intake and in such contiguous areas as the department may determine necessary for assured protection. In addition, ALL~~

Michigan waters of the Great Lakes and connecting waters ~~and all waters that have been designated for use as public water supply sources~~ shall meet the human cancer and human noncancer values for drinking water established pursuant to

R 323.1057(4). The requirement to meet the human cancer and human noncancer values for drinking water shall not apply to pollutant loadings from a tributary in an area where a tributary mixes with the Great Lake, connecting water, or a waterbody that has been designated for use as a public water supply source, unless a water intake was located in this area on ~~the effective date of this rule~~ APRIL 2, 1999.

(9) Water quality of all surface waters of the state serving as migratory routes for anadromous salmonids shall be protected as necessary to assure that migration is not adversely affected.

(10) ~~EFFLUENT D~~discharges to wetlands, ~~as defined pursuant to the provisions of part 303 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.30301 to 324.30323 of the Michigan Compiled Laws,~~ that result in water quality that is ~~less than~~ INCONSISTENT WITH that prescribed by these rules may be permitted after a use attainability analysis shows that designated uses are not and cannot be attained and shows that attainable uses will be protected.

(11) After completion of a comprehensive plan developed under

R 323.1064(3), upon petition by a municipality or other person, and in conformance with the requirements of 40 C.F.R. §131.10 (1995), designation of uses, WHICH ARE ADOPTED BY REFERENCE IN R 323.1117, the department may determine that attainment of the dissolved oxygen standards of R 323.1064(1) is not feasible and designate, by amendment to this rule, a limited warmwater AQUATIC LIFE ~~fishery~~ use subcategory of the warmwater AQUATIC LIFE ~~fishery~~ use or a limited coldwater AQUATIC LIFE ~~fishery~~ use subcategory of coldwater AQUATIC LIFE ~~fishery~~ use. For waters so designated, the dissolved oxygen standards specified in the provisions of R 323.1064(2) and all other applicable standards of these rules apply. For waters so designated, the dissolved oxygen standards specified in R 323.1064(1) do not apply. Not less than 60 days before a municipality or other person files a petition pursuant to this subrule, a petitioner shall provide written notice to the department and the clerk of the municipalities in which the affected waters are located of the petitioner's intent to file a petition.

### **R 323.1103 Variances.**

Rule 103. (1) A variance may be granted from any water quality standard (WQS) that is the basis of a water quality-based effluent limitation in a national pollutant discharge elimination system (NPDES) permit, as restricted by the following provisions:

(a) A WQS variance applies only to the permittee or permittees requesting the variance and only to the pollutant or pollutants specified in the variance. The variance does not modify the water quality standards for the water body as a whole.

(b) A variance shall not apply to new dischargers unless the proposed discharge is necessary to alleviate an imminent and substantial danger to the public health or welfare.

(c) A WQS variance shall not be granted that would likely jeopardize the continued existence of any endangered or threatened species listed under section 4 of the endangered species act or result in the destruction or adverse modification of the species' critical habitat.

(d) A WQS variance shall not be granted if the standard in the receiving water will be attained by implementing the treatment technology requirements under the clean water act of 1972, as amended, 33 U.S.C. §§301(b) and 306, and by the discharger implementing cost-effective and reasonable best management practices for nonpoint sources over which the discharger has control within the vicinity of the facility.

(e) The duration of a WQS variance shall not exceed the term of the NPDES permit. If the time frame of the variance is the same as the permit term, then the variance shall stay in effect until the permit is reissued or revoked.

(2) A variance may be granted if the permittee demonstrates to the department that attaining the WQS is not feasible for any of the following reasons:

(a) Naturally occurring pollutant concentrations prevent the attainment of the WQS.

(b) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the WQS.

(c) Human-caused conditions or sources of pollution prevent the attainment of the WQS and cannot be remedied or more environmental damage would occur in correcting the conditions or sources of pollution than would occur by leaving the conditions or sources in place.

(d) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the WQS, and it is not feasible to restore the water body to its original condition or to operate the modification in a way that would result in the attainment of the WQS.

(e) Physical conditions related to the natural features of the water body preclude attainment of WQS.

(f) Controls more stringent than the treatment technology requirements in the clean water act of 1972, as amended, 33 U.S.C. §§301(b) and 306 would result in unreasonable economic effects on the discharger and affected communities.

(3) In addition to the requirements of subrule (2) of this rule, a permittee shall do both of the following:

(a) Show that the variance requested conforms to the antidegradation demonstration requirements of R 323.1098.

(b) Characterize the extent of any increased risk to human health and the environment associated with granting the variance compared with compliance with WQS without the variance in a way that enables the department to conclude that the increased risk is consistent with the protection of HUMAN HEALTH AND THE ENVIRONMENT ~~the public health, safety, and welfare.~~

(4) A permittee may request a variance when a NPDES permit application is submitted or during permit development. A variance request may also be submitted with a request for a permit modification. The variance request to the department shall include the following information:

(a) All relevant information which demonstrates that attaining the WQS is not feasible based on 1 or more of the conditions in subrule (2) of this rule.

(b) All relevant information which demonstrates compliance with subrule (3) of this rule.

(5) The variance request shall be available to the public for review during the public comment period on the draft NPDES permit. The preliminary decision regarding the variance shall be included in the public notice of the draft NPDES permit. The department will notify the other Great Lakes states of the preliminary variance decision.

(6) If the department determines, based on the conditions of subrules (2) and (3) of this rule, that the variance request demonstrates that attaining the WQS is not feasible, then the department shall authorize the variance through issuance of the NPDES permit. The permit shall contain all conditions needed to implement the variance, including, at a minimum, all of the following conditions:

(a) That compliance with an effluent limitation that, at the time the variance is granted, represents the level currently achievable by the permittee. For an existing discharge, the effluent limitation shall be no less stringent than that achieved under the previous permit.

(b) That reasonable progress be made in effluent quality toward attaining the water quality standards. If the variance is approved for any BCC, a pollutant minimization program shall be conducted consistent with the provisions in ~~paragraphs (i) through (iv) of R 323.1213(d)(I) TO (IV).~~ The department shall consider cost-effectiveness during the development and implementation of the pollutant minimization program.

(c) That if the duration of a variance is shorter than the duration of a permit, then compliance with an effluent limitation that is sufficient to meet the underlying water quality standard shall be achieved when the variance expires.

(7) The department shall deny a variance request through action on the NPDES permit if a permittee fails to make the demonstrations required under subrules (2) and (3) of this rule.

(8) A variance may be renewed, subject to the requirements of subrules (1) through (7) of this rule. As part of any renewal application, a permittee shall again demonstrate that attaining WQS is not feasible based on the requirements of subrules (2) and (3) of this rule. A permittee's application shall also contain information concerning the permittee's compliance with the conditions incorporated into the permittee's permit as part of the original variance pursuant to subrule (6) of this rule.

(9) Notwithstanding the provision in subrule (1)(a) of this rule, the department may grant multiple discharger variances. If the department determines that a multiple discharger variance is necessary to address widespread WQS compliance issues, including the presence of ubiquitous pollutants or naturally high background levels of pollutants in a watershed, then the department may waive the variance demonstration requirements in subrules (2), (3), and (4) of this rule. A permittee that is included in the multiple discharger variance will be subject to the permit requirements of subrule (6) of this rule if it is determined under R 323.1211 that there is reasonable potential for the pollutant to exceed a permit limitation developed under ~~to~~ R 323.1209.

#### **R 323.1105 Multiple designated uses.**

Rule 105. When a particular portion of the SURFACE waters of the state is designated for more than 1 use, the most restrictive water quality standards for ~~one~~ 1 or more of those designated uses shall apply to that portion.

#### **R 323.1116 Availability of documents.**

Rule 116. The following documents referenced in this part are available for inspection at, and may be obtained at no cost from, the Lansing Office of the Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan 48909-7773:

(a) ~~"1996 Michigan Critical Materials Register."~~

(A)(b) "Designated Trout Lakes and Regulations," September 10 14, 1998 1996.

(B)(c) "Coldwater Lakes of Michigan," August 1976.

(C)(d) "Designated Trout Streams for the State of Michigan," Director's Order No. DFI-101.97.

(D) "PUBLIC WATER SUPPLIES INTAKES IN MICHIGAN," AUGUST 24, 1998.

#### **R 323.1117 Adoption of standards by reference.**

Rule 117. All of the following standards are adopted by reference in these rules. COPIES are available for inspection at the Lansing office of the Department of Environmental Quality, may be obtained FROM THE DEPARTMENT OF ENVIRONMENTAL QUALITY, P.O. BOX 30273, LANSING, MICHIGAN, 48909-7773, AT A COST AS OF THE TIME OF ADOPTION OF THESE RULES OF 5 CENTS PER PAGE AND A LABOR RATE OF \$19.78 PER HOUR, OR MAY BE OTHERWISE OBTAINED as indicated:

(a) ~~"EPA Priority Pollutants and Hazardous Substances," 40 C.F.R. §122.21, Appendix D (1995). Copies may be obtained from the Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan 48909-7773, at a cost as of the time of adoption of these rules of 5 cents per page and a labor rate of \$17.07 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of \$41.00.~~



(A)(b) "Guidelines Establishing Test Procedures for Analysis of Pollutants," 40 C.F.R. §136 et seq. (2000) (1995). Copies may be obtained from ~~the Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan 48909 7773, at a cost of as of the time of adoption of these rules of 5 cents per page and a labor rate of \$17.07 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of \$55.00 \$41.00, OR VIA THE INTERNET AT <http://www.access.gpo.gov/nara>.~~

(B)(e) "Standards for Protection Against Radiation," 10 C.F.R. §20 et seq. (1995). Copies may be obtained from ~~the Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan 48909 7773, at a cost as of the time of adoption of these rules of 5 cents per page and a labor rate of \$17.07 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of \$55.00 \$30.00, OR VIA THE INTERNET AT <http://www.access.gpo.gov/nara>.~~

(C)(d) "Designation of Uses," 40 C.F.R. §131.10 (1995). Copies may be obtained from ~~the Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan 48909 7773, at a cost as of the time of adoption of these rules of 5 cents per page and a labor rate of \$17.07 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of \$38.00 \$41.00, OR VIA THE INTERNET AT <http://www.access.gpo.gov/nara>.~~

(D)(e) "Standard GUIDE Practice for Conducting Bioconcentration Tests with Fishes and Saltwater Bivalve Molluscs" ASTM standard E 1022-94 E1022-84, 1993 1994. Copies may be obtained from ~~the Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan 48909 7773, at a cost as of the time of adoption of these rules of 5 cents per page and a labor rate of \$17.07 per hour, or from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959, at a cost as of the time of adoption of these rules of \$35.00 \$21.00.~~

(E)(f) "Conditions Applicable to all Permits," 40 C.F.R. §122.41(m) (1995). Copies may be obtained from ~~the Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan, 48909 7773, at a cost as of the time of adoption of these rules of 5 cents per page and a labor rate of \$17.07 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of \$38.00 \$41.00, OR VIA THE INTERNET AT <http://www.access.gpo.gov/nara>.~~

(F)(g) Gobas, F.A.P.C. 1993. "A Model for Predicting the Bioaccumulation of Hydrophobic Organic Chemicals in Aquatic Foodwebs: Applications to Lake Ontario," Ecological Modeling, volume 69, pages 1 to 17.

(G) HOWE, R.B., K.S. CRUMP, AND C. VAN LANDINGHAM (1986), GLOBAL '86, "A COMPUTER PROGRAM TO EXTRAPOLATE QUANTAL ANIMAL TOXICITY DATA TO LOW DOSES," U.S. ENVIRONMENTAL PROTECTION AGENCY, RESEARCH TRIANGLE INSTITUTE, K.S. CRUMP AND COMPANY, INC..

(H) "TABLE 6. – POLLUTANTS OF INITIAL FOCUS IN THE GREAT LAKES WATER QUALITY INITIATIVE," 40 C.F.R. §132 (1995). COPIES MAY BE OBTAINED FROM THE SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402, AT A COST AS OF THE TIME OF ADOPTION OF THESE RULES OF \$38.00, OR VIA THE INTERNET AT [HTTP://WWW.ACCESS.GPO.GOV/NARA](http://www.access.gpo.gov/nara).

(I) "WATER QUALITY STANDARDS HANDBOOK, SECOND EDITION, SECTION 3.7 – SITE-SPECIFIC AQUATIC LIFE CRITERIA", EPA-823-B-94-005A, AUGUST 1994. COPIES MAY BE OBTAINED FROM THE UNITED STATES DEPARTMENT OF COMMERCE, NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA, 22161, AT A COST AS OF THE TIME OF ADOPTION OF THESE RULES OF \$70.00, OR VIA THE INTERNET AT [HTTP://WWW.EPA.GOV/EPAHOME/PUBLICATIONS.HTM](http://www.epa.gov/epahome/publications.htm).

(J) “RECOMMENDATIONS FOR AND DOCUMENTATION OF BIOLOGICAL VALUES FOR USE IN RISK ASSESSMENT,” UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, 1988. COPIES MAY BE OBTAINED FROM THE UNITED STATES DEPARTMENT OF COMMERCE, NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA, 22161, AT A COST AS OF THE TIME OF ADOPTION OF THESE RULES OF \$75.00, OR VIA THE INTERNET AT [HTTP://WWW.EPA.GOV/EPAHOME/PUBLICATIONS.HTM](http://www.epa.gov/epahome/publications.htm).

(K) “MINIMUM DATA REQUIREMENTS” 40 C.F.R §132, APPENDIX C, ITEM II, (1995). COPIES MAY BE OBTAINED FROM THE SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402, AT A COST AS OF THE TIME OF ADOPTION OF THESE RULES OF \$38.00, OR VIA THE INTERNET AT [HTTP://WWW.ACCESS.GPO.GOV/NARA](http://www.access.gpo.gov/nara).

(L) “REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) COMPREHENSIVE GUIDE TO THE RTECS, PUBLICATION NUMBER 97-119, UNITED STATES DEPARTMENT OF HEALTH AND HUMAN SERVICES, NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH, JULY 1997. COPIES MAY BE OBTAINED FROM NIOSH PUBLICATIONS, 4676 COLUMBIA PARKWAY, MAIL STOP C-13, CINCINNATI, OHIO, 45226-1998, OR VIA THE INTERNET AT [HTTP://WWW.CDS.GOV/NIOSH/HOME PAGE.HTML](http://www.cds.gov/niosh/homepage.html).

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**PROPOSED ADMINISTRATIVE RULES**

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**ORR # 2001-014**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SURFACE WATER QUALITY DIVISION**

**WATER RESOURCES PROTECTION**

Filed with the Secretary of State on \_\_\_\_\_

These rules take effect 7 days after filing with the Secretary of State

(By authority conferred on the department of environmental quality by sections 3104 and 3106 of Act No. 451 of the Public Acts of 1994, as amended, being §§ 1994 PA 451, MCL 324.3104 and 324.3106 of the Michigan Compiled Laws)

R 323.1203, R 323.1205, R 323.1209, R 323.1211, R 323.1213, R 323.1217, R 323.1219, AND ~~to~~ R 323.1221 OF THE MICHIGAN ADMINISTRATIVE CODE are AMENDED to read as hereinafter set forth. FOLLOWS:

**PART 8. WATER QUALITY-BASED EFFLUENT LIMIT DEVELOPMENT FOR TOXIC SUBSTANCES**

**R 323.1203 Definitions; A to L.**

Rule 1203. As used in this part:

- ~~(e)~~ (A) “Acute-chronic ratio (ACR)” means a standard measure of the acute toxicity of a material divided by an appropriate measure of the chronic toxicity of the same material under comparable conditions.
- (b) “Acute toxicity” means an adverse effect that results from an acute exposure which occurs within any short observation period and which usually does not constitute a substantial portion of the life span of the organism.
- ~~(a)~~ (C) “Acute toxic unit (TU<sub>a</sub>)” means 100/LC<sub>50</sub> where the LC<sub>50</sub> is determined from a whole effluent toxicity (WET) test which produces a result that is statistically or graphically estimated to be lethal to 50% of the test organisms.
- (d) “Aquatic life value” means a tier I or tier II value developed under R 323.1057(2).
- (e) “Bioaccumulation equivalency factor (BEF)” means the bioaccumulation potential for the toxicologically important chlorinated dibenzo-p-dioxins and chlorinated dibenzo-p-furans relative to 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) for use in calculating 2,3,7,8-TCDD toxicity equivalency concentrations in water as the 2,3,7,8-TCDD toxicity equivalency concentrations relate to deriving human health water quality values.
- (f) “Bioaccumulation factor (BAF)” means the ratio, in liters per kilogram, of a substance’s concentration in tissue of an aquatic organism to its concentration in the ambient water where both the organism and its food are exposed and the ratio does not change substantially over time.

- (g) “Bioaccumulative chemical of concern (BCC)” means a chemical which, upon entering the surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor (BAF) of more than 1000 derived after considering metabolism and other physiochemical properties that might enhance or inhibit bioaccumulation. The human health bioaccumulation factor shall be derived according to R 323.1057(5). Chemicals with half-lives of less than 8 weeks in the water column, sediment, and biota are not BCCs. The minimum BAF information needed to define an organic chemical as a BCC is either a field-measured BAF or a BAF derived using the biota-sediment accumulation factor (BSAF) methodology. The minimum BAF information needed to define an inorganic chemical as a BCC, including an organometal, is either a field-measured BAF or a laboratory-measured bioconcentration factor (BCF). The BCCs to which these rules apply are identified in table 5 of R 323.1057.
- (h) “Bioconcentration factor (BCF)” means the ratio, in liters per kilogram, of a substance’s concentration in tissue of an aquatic organism to its concentration in the ambient water in situations where the organism is exposed through the water only and the ratio does not change substantially over time.
- (i) “Biota-sediment accumulation factor (BSAF)” means the ratio, in kilograms of organic carbon per kilogram of lipid, of a substance’s lipid-normalized concentration in tissue of an aquatic organism to its organic carbon-normalized concentration in surface sediment in situations where the ratio does not change substantially over time, both the organism and its food are exposed, and the surface sediment is representative of average surface sediment in the vicinity of the organism.
- (j) “Carcinogen” means a substance ~~that~~ WHICH causes an increased incidence of benign or malignant neoplasms in ~~humans~~ ANIMALS or ~~animals~~ HUMANS or that substantially decreases the time in which neoplasms develop in animals or humans.
- (k) “Chemical-specific water quality-based effluent limit” means water quality-based effluent limits that are based on an individual chemical.
- (l) “Chronic toxicity” means a concurrent and delayed adverse effect that occurs only as a result of a chronic exposure.
- (m) “Chronic toxic unit (TU<sub>c</sub>)” means 100/MATC or 100/IC<sub>25</sub>, where the maximum acceptable toxicant concentration (MATC) and IC<sub>25</sub> are expressed as a percent effluent in the test medium.
- (n) “Clean water act” means the federal water pollution control act codified at 33 U.S.C. §1251 et seq., as amended.
- (o) “Daily maximum water quality-based effluent limit” means an effluent specific water quality-based effluent limit in an NPDES permit developed to protect aquatic life from acute chemical specific or whole effluent toxicity.
- (p) “Department” means the DIRECTOR OF THE Michigan department of environmental quality, OR HIS OR HER DESIGNEE TO WHOM THE DIRECTOR DELEGATES A POWER OR DUTY BY WRITTEN INSTRUMENT.
- (q) “Detection level” means the lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.
- (r) “Discharge-induced mixing” means the mixing of a discharge and receiving water that occurs due to discharge momentum and buoyancy up to the point where mixing is controlled by ambient turbulence.
- (s) “Dissolved metal” means the concentration of a metal that will pass through a 0.45-μm membrane filter.
- (t) “Existing discharge” means any building, structure, facility, or installation from which there is or may be a discharge of toxic substances to the surface waters of the state that is not a new discharge.
- (u) “Final acute value (FAV)” means the level of a chemical or mixture of chemicals that does not allow the mortality or other specified response of aquatic organisms to exceed 50% when exposed for 96 hours, except where a shorter time period is appropriate for certain species. The FAV shall be calculated under R 323.1057(2) if appropriate for the ~~substance~~ CHEMICAL.

- (v) “Human cancer value (HCV)” means the maximum ambient water concentration of a substance at which a lifetime of exposure from either drinking the water, consuming fish from the water, and conducting water-related recreation activities or consuming fish from the water and conducting water-related recreation activities will represent a plausible upper bound risk of contracting cancer of 1 in 100,000 using the exposure assumptions and methodology specified in R 323.1057(4).
- (w) “Human noncancer value (HNV)” means the maximum ambient water concentration of a substance at which adverse noncancer effects are not likely to occur in the human population from lifetime exposure through either drinking the water, consuming fish from the water, and conducting water-related recreation activities or consuming fish from the water and conducting water-related recreation activities using the exposure assumption and methodology in R 323.1057(4).
- (x) “Intake toxic substance” means the amount of a toxic substance that is present in surface or groundwaters of the state at the time the toxic substance is withdrawn from the waters by the discharger or present in the water provided to the discharger by another facility.
- (y) “Intermittent wet-weather point source” means a point source discharge that occurs as a result of a rainfall or snowmelt event. An intermittent wet-weather point source includes a treated or untreated combined sewer overflow, but does not include a storm water discharge that is mixed with other industrial or commercial wastewater or an increased discharge from a municipal wastewater treatment plant due to a rainfall or snowmelt event.
- (z) “IC<sub>25</sub>” means the toxicant concentration that would cause a 25% reduction in a nonquantal biological measurement for the test population.
- (aa) “LC<sub>50</sub>” means a statistically or graphically estimated concentration that is expected to be lethal to 50% of a group of organisms under specified conditions.
- (bb) “Load allocation” means the portion of a receiving water’s loading capacity that is attributed to existing or future nonpoint sources, including natural background sources.
- (cc) “Loading capacity” means the greatest amount of pollutant loading that a water can receive without violating water quality standards.
- (dd) “Lotic” means surface waters of the state that exhibit flow.

### **R 323.1205 Definitions; M to Z.**

Rule 1205. As used in this part:

- (a) “Mass load” means a wasteload allocation specified in units of weight per time.
- (b) “Maximum acceptable toxicant concentration (MATC)” means the concentration obtained by calculating the geometric mean of the lower and upper chronic limits from a chronic test. A lower chronic limit is the highest tested concentration that did not cause the occurrence of a specific adverse effect. An upper chronic limit is the lowest tested concentration which did cause the occurrence of a specific adverse effect and above which all tested concentrations caused such an occurrence.
- (c) “Minimum level” means the concentration at which the entire analytical system gives THE LOWEST recognizable mass-spectra SIGNAL and acceptable calibration points when analyzing for a toxic substance of concern. The level corresponds to the lowest point at which the calibration curve is determined.
- (d) “Mixing zone” means the portion of a water body in which a point source discharge or venting groundwater is mixed with the receiving water.
- (e) “Monthly average water quality-based effluent limit (WQBEL)” means an effluent specific water quality-based effluent limit in a national pollutant discharge elimination system (NPDES) permit developed to protect aquatic life, human health, and wildlife from chronic chemical specific toxicity or aquatic life from chronic whole effluent toxicity.
- (f) “National pollutant discharge elimination system (NPDES)” means a permit issued by the department to a discharger pursuant to sections 3106 and 3112 of Act No. 451 of the Public Acts of 1994, as amended, being §§ 1994 PA 451, MCL 324.3106 and 324.3112 of the Michigan Compiled Laws.

(g) “New discharge” means any building, structure, facility, or installation from which there is or may be a discharge of toxic substances to the surface waters of the state, the construction of which commenced after ~~the effective date of these rules~~ JULY 29, 1997.

(h) “Nonpoint source” means a source of a toxic substance to the surface waters of the state other than a source defined as a point source.

(i) “Permittee” means the individual or facility that is issued an NPDES permit.

(j) “Point source” means a discharge that is released to the surface waters of the state by a discernible, confined, and discrete conveyance, including any of the following from which wastewater is or may be discharged:

(i) A pipe.

(ii) A ditch.

(iii) A channel.

(iv) A tunnel.

(v) A conduit.

(vi) A well.

(vii) A discrete fissure.

(viii) A container.

(ix) A concentrated animal feeding operation.

(x) A vessel BOAT or other floating WATERcraft.

(k) “Pollution prevention” means eliminating or minimizing the initial generation of waste at the source or utilizing environmentally sound on-site and off-site reuse or recycling. Waste treatment, release, or disposal is not considered pollution prevention.

(l) “Quantification level” means the measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calculated at a specified concentration above the detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant.

(m) “Raw water” means the surface waters of the state before any treatment.

(n) “Receiving water” means the surface waters of the state into which an effluent is or may be discharged.

(o) “Same body of water” means that, for purposes of evaluating intake toxic substances consistent with ~~R 323.1225~~ R 322.1211, the department will consider intake toxic substances to be from the same body of water if the department finds that the intake toxic substance would have reached the vicinity of the outfall point in the receiving water within a reasonable period had it not been removed by the permittee and there is a direct hydrological connection between the intake and the discharge points. Notwithstanding the provisions of this subdivision, an intake toxic substance shall be considered to be from the same body of water if the permittee’s intake point is located on a Great Lake and the outfall point is IN CLOSE PROXIMITY TO THE INTAKE POINT AND IS located on a tributary of that Great Lake. In this situation, the background concentration of the toxic substance in the receiving water shall be similar to or greater than that in the intake water and a difference in any water quality characteristic between the intake and receiving water shall not result in an adverse impact on the receiving water. Groundwater sources of intake water can also be considered the same body of water if both of the following conditions are met:

(i) The groundwater vents to the same surface water body where the discharge is located.

(ii) The concentration of the intake toxic substance in the groundwater source is similar to the background groundwater concentration which exists at or regionally proximate to the groundwater source that is not attributable to any release at or regionally proximate to the source. Release shall be defined consistent with the September, 1996, revisions to section 324.20101 of Act No. 451 of the Public Acts of 1994, being ~~§ 1994 PA 451, MCL 324.20101 of the Michigan Compiled Laws~~. Where a release has influenced the concentration

of the toxic substance in the groundwater source, a same body of water determination shall be made by the department on a case-by-case basis. For purposes of this paragraph, the background groundwater concentration of the intake toxic substance shall be established at the time of permit issuance, reissuance, or modification based on data available to the department or data provided by the permittee from at least ~~one~~ 1 representative location.

(p) “Surface waters of the state” means all of the following, but does not include drainage ways and ponds used solely for wastewater conveyance, treatment, or control:

(i) The Great Lakes and their connecting waters.

(ii) All inland lakes.

(iii) Rivers.

(iv) Streams.

(v) Impoundments.

(vi) Open drains.

(vii) WETLANDS.

~~(viii)~~ VIII) Other surface bodies of water within the confines of the state.

(q) “Tier I value” means a value for aquatic life, human health, or wildlife calculated under R 323.1057 using a tier I toxicity data base.

(r) “Tier II value” means a value for aquatic life or human health calculated under R 323.1057 using a tier II toxicity data base.

(s) “Toxicity equivalency factor (TEF)” means a reasonable estimate of the toxicity associated with a mixture of chlorinated dibenzo-p-dioxins and chlorinated dibenzo-p-furans relative to the toxicity of ~~2,3,7,8-tetrachlorodibenzo-p-dioxin~~ 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN.

(t) “Toxicity reduction evaluation (TRE)” means a site-specific study conducted in a stepwise process designed to identify the causative agents of effluent toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity.

(u) “Toxic substance” means a substance, except for heat, that is present in a sufficient concentration or quantity that is or may become harmful to plant life, animal life, or designated uses. These rules apply to all of the following toxic substances:

~~(i) The substances listed on the 1996 Michigan Critical Materials Register established under Part 31 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.3101 to 324.3119 of the Michigan Compiled~~

~~(ii) I) The priority pollutant and hazardous chemicals specified in the provisions of 40 C.F.R. §122.21, Appendix D, (1990), WHICH ARE ADOPTED BY REFERENCE IN R 323.1221.~~

~~(iii) II) The pollutants of initial focus specified in the provisions of 40 C.F.R. Part 132 (1995), water quality guidance for the Great Lakes system, WHICH ARE ADOPTED BY REFERENCE IN R 323.1221.~~

III) THE POLLUTANTS SPECIFIED IN TABLE 1.

(iv) Any other toxic substances that the department determines are of concern at a specific site.

(v) “Translator” means a value used to predict the ratio of total or total recoverable metal to dissolved metal in a surface water of the state that is then used to derive a total or total recoverable water quality-based effluent limit using dissolved aquatic life tier I or tier II values.

(w) “Venting groundwater” means groundwater that is entering a surface water of the state from a facility as defined in section 324.20101 of Act No. 451 of the Public Acts of 1994, as amended, being § 1994 PA 451, MCL 324.20101 of the Michigan Compiled Laws.

(x) “Wasteload allocation (WLA)” means the allocation for an individual point source which is developed in accordance with R 323.1209 and which ensures that the level of water quality to be achieved by the point source complies with all applicable water quality standards.

(y) “Water quality-based effluent limit (WQBEL)” means an effluent limit developed for an NPDES permit that will ensure that the level of water quality to be achieved by the point source complies with all applicable water quality standards.

(z) “Water quality standards” means the Part 4. Water Quality Standards developed under Part 31 of ~~Act No. 451 of the Public Acts of 1994, as amended, being §§ 1994 PA 451, MCL 324.3101 to 3119-3133 of the Michigan Compiled Laws~~ ET SEQ.

(aa) “Water quality value” means a tier I or tier II aquatic life or human health value or tier I wildlife value developed under R 323.1057.

(BB) “WETLAND” MEANS LAND CHARACTERIZED BY THE PRESENCE OF WATER AT A FREQUENCY AND DURATION SUFFICIENT TO SUPPORT, AND THAT UNDER NORMAL CIRCUMSTANCES DOES SUPPORT, WETLAND VEGETATION OR AQUATIC LIFE, AND IS COMMONLY REFERRED TO AS A BOG, SWAMP, OR MARSH.

~~(bb)~~ CC) “Whole effluent toxicity” means the total toxic effect of an effluent measured directly with a toxicity test under R 323.1219.

(DD) ‘WILDLIFE VALUE” MEANS THE MAXIMUM AMBIENT WATER CONCENTRATION OF A SUBSTANCE AT WHICH ADVERSE EFFECTS ARE NOT LIKELY TO RESULT IN POPULATION-LEVEL IMPACTS TO MAMMALIAN AND AVIAN WILDLIFE POPULATIONS FROM LIFETIME EXPOSURE THROUGH DRINKING WATER AND AQUATIC FOOD SUPPLY, USING THE METHODOLOGY SPECIFIED IN R 323.1057(3).

TABLE 1.

1-AMINO-2-METHYLANTHRAQUINONE  
 1-CHLORO-4-PHENOXYBENZENE  
 1,1,1,2-TETRACHLOROETHANE  
 1,2-EPOXYBUTANE  
 1,2,3-TRICHLOROBENZENE  
 1,2:3,4-DIEPOXYBUTANE  
 1,2,3,5-TETRACHLOROBENZENE  
 1,3-BUTADIENE  
 1,3-PROPANE SULTONE  
 1,4-DIOXANE  
 1,5-NAPHTHALENEDIAMINE  
 2-ACETYLAMINOFLUORENE  
 2-AMINOANTHRAQUINONE  
 2-METHYL-1-NITROANTHRAQUINONE  
 2-NAPHTHYLAMINE  
 2-NITROPROPANE  
 2,4-DIAMINOANISOLE SULFATE  
 2,4-DIAMINOTOLUENE  
 2,3,4,5-TETRACHLOROPHENOL  
 2,3,4,6-TETRACHLOROPHENOL  
 2,3,5,6-TETRACHLOROPHENOL  
 2,4,5-TRICHLOROPHENOL  
 2,4,5-TRICHLOROTOLUENE  
 2,4,5-TRIMETHYLANILINE  
 3-AMINO-9-ETHYLCARBAZOLE



3-AMINO-9-ETHYLCARBAZOLE  
HYDROCHLORIDE  
3-(CHLOROMETHYL)PYRIDINE  
4-AMINOBIIPHENYL  
4-CHLORO-M-PHENYLENEDIAMINE  
4-CHLORO-O-PHENYLENEDIAMINE  
4,4'-DIAMINODIPHENYL ETHER  
4-DIMETHYLAMINOAZOBENZENE  
4,4'-METHYLBIS(2-METHYLANILINE)  
4,4'-METHYLENEBIS(N,N-  
DIMETHYL)BENZENAMINE  
4,4'-THIODIANILINE  
5-CHLORO-O-TOLUIDINE  
5-NITROACENAPHTHENE  
5-NITRO-O-ANISIDINE  
ABIETIC ACID  
ACETONE CYANOHYDRIN  
ACTINOMYCIN D  
AFLATOXINS  
ALDICARB  
AMINOAZOBENZENE  
O-AMINOAZOTOLUENE  
AMITROLE  
ANILAZINE  
ANILINE HYDROCHLORIDE  
O-ANISIDINE  
O-ANISIDINE HYDROCHLORIDE  
ANTIMYCIN A  
ARAMITE  
AZINPHOS-ETHYL  
AZINPHOS-METHYL  
AZOBENZENE  
BARBAN  
BENDICARB  
BENOMYL  
BROMOMETHANE  
BROMOXYNIL  
BUTYLBUTANOL NITROSAMINE  
CAPTAFOL  
CARBOPHENOTHION  
CHLORAMINES  
CHLORDECONE  
CHLORFENVINPHOS  
CHLORINATED DIBENZOFURANS  
CHLOROBENZILATE

CHLOROMETHANE  
BIS(CHLOROMETHYL)ETHYL  
HYDROCHLORIDE  
P-CHLOROPHENOL  
CHLOROPRENE  
CLONITRALID  
P-CRESIDINE  
CROTOXYPHOS  
CUPFERRON  
CYCASIN  
CYCLOHEXAMIDE  
CYCLOPHOSPHAMIDE  
DEHYDROABIETIC ACID  
DEMETON  
DIALATE  
DIBROMOCHLOROPROPANE (DBCP)  
TRIS(2,3-DIBROMOPROPYL)PHOSPHATE  
DICHROTOPHOS  
DIETHYLHEXYL PHTHALATE  
DIETHYLSTILBESTROL  
N,N-DIETHYLTHIOUREA  
DIHYDROSAFROLE  
DIMETHOATE  
DIMETHYL DISULPHIDE  
DIMETHYL SULFATE  
DIMETHYLHYDRAZINES  
DINOCAP  
DINOSEP  
DIOXATHION  
DIPHENYL ETHER  
EPN  
ETHYL CHLORIDE  
ETHYLENE OXIDE  
ETHYLENE THIOUREA  
ETHYLENEIMINE  
ETHYLMETHANESULFONATE  
FENSULFOTHION  
FLUCHLORALIN  
FURATHIAZOLE  
HEXACHLOROCYCLOHEXANE  
HEXAMETHYLPHOSPHORAMIDE  
HYDRAZINE  
HYDROBENZENE  
HYDROGEN SULFIDE  
HYDROQUINONE

N-(2-HYDROXYETHYL)ETHYLENEIMINE  
ISONICOTINIC ACID HYDROZINE  
KANECHLOR C  
KETENE  
LACTONITRILE  
LASIOCARPINE  
LEPTOPHOS  
MALACHITE GREEN  
MESTRANOL  
METHACRYLONITRILE  
METHOMYL  
METHYL CHLOROFORM  
N-METHYL FORMAMIDE  
METHYL HYDRAZINE  
METHYLENEBIS(2-CHLOROANILINE)  
METHYLTHIOURACIL  
MITOMYCIN C  
MONOCROTALINE  
MONOCROTOPHOS  
MUSTARD GAS  
NEOABIETIC ACID  
NIFURTHIAZOLE  
NIRIDAZOLE  
NITHIAZIDE  
NITROFEN  
NITROGEN MUSTARD  
N-NITROSO-DI-N-BUTYLAMINE  
N-NITROSODIETHYLAMINE  
P-NITROSODIPHENYLAMINE  
N-NITROSO-N-ETHYLUREA  
N-NITROSO-N-METHYLUREA  
N-NITROSOMETHYL VINYLAMINE  
N-NITROSOMORPHOLINE  
N-NITROSOARCOSINE  
OCTACHLOROSTYRENE  
OXYDEMETONMETHYL  
PARAQUAT  
PENTACHLORONITROBENZENE  
PHENAZOPYRIDINE HYDROCHLORIDE  
PHENESTREIN  
PHENOBARBITOL  
O-PHENYLPHENOL  
PHENYTOIN SODIUM  
PHORATE  
PHOSAZETIM

PHOSMET  
PHOSPHAMIDON  
PIPERONYL SULFOXIDE  
POLYBROMINATED BIPHENYLS (PBB)  
POLYCHLORINATED NAPHTHALENES  
PROPYLENEIMINE  
PROPYLTHIOURACIL  
ROTENONE  
SEMICARBAZIDE  
SEMICARBAZIDE HYDROCHLORIDE  
SILVEX  
SODIUM FLUOROACETATE  
SODIUM-O-PHENYLPHENOL  
SULFALLATE  
SULFOTEPP  
TEPP  
TERBUFOS  
TETRACHLOROQUAIACOL  
TETRACHLORVINPHOS  
TETRANITROMETHANE  
THIOACETAMIDE  
THIOUREA  
THIRAM  
O-TOLUIDINE  
O-TOLUIDINE HYDROCHLORIDE  
TRIARYL PHOSPHATE ESTERS  
TRIBUTYL TIN (AND SALTS AND ESTERS)  
TRICHLORFON  
TRIFLURALIN  
TRIMETHYLPHOSPHATE  
URACIL MUSTARD  
URETHANE  
VINYL BROMIDE  
ZIRAM

R 323.1209 Development of wasteload allocations for toxic substances.

Rule 1209. (1) In the absence of a total maximum daily load (TMDL) established under R 323.1207, or where consistent with a TMDL, the following procedure shall be used to calculate individual point source wasteload allocations (WLAs) for aquatic life, human health, and wildlife values consistent with the requirements of R 323.1211(2):

(a) Chronic WLAs for discharges to lotic waters shall be developed for the toxic substance as follows:

$$WLA = \frac{Z_t (Q_e + Q_r) - (Q_r)(Cr)}{Q_e}$$

or

or

$$WLA = \frac{(Z_d)(T) (Q_e + Q_r) - (Q_r)(Cr)}{Q_e}$$

Qe

Where:

Zt = water quality value developed for the toxic substance expressed as total or total recoverable.

Zd = water quality value for aquatic life expressed as dissolved metal. Values expressed as dissolved, but for which a translator (T) is not available, shall be expressed as total or total recoverable for purposes of this subdivision.

T = dissolved to total metal translator for aquatic life wasteload allocations. For the metals in Table 2, T equals the given value or one derived from site-specific data. For metals not listed in Table 2, T is equal to a translator derived by the department when sufficient information is available or from site-specific data.

Qe = effluent design flow, which is the annual average design flow for municipalities and maximum authorized flow for other facilities, unless it can be demonstrated to the department that an alternate design flow is appropriate.

Qr = flow of the receiving water allocated for mixing under R 323.1082. If a discharger has an intake upstream of the point of discharge, then Qr shall reflect the reduction in the design flow volume attributable to the intake.

Cr = receiving water background concentration of the toxic substance developed under R 323.1207(1)(g).

The lowest of the WLAs developed under this subdivision for the chronic aquatic life, human health, or wildlife values for each toxic substance shall be the basis for the water quality-based effluent limit (WQBEL) as specified in R 323.1211(4)(a).

Table 2.

Dissolved to Total Metal Translators for Aquatic Life Wasteload Allocations

Toxic Substance

Translator (T)

Cadmium.....	2.1
Chromium.....	1.5
Copper.....	1.5
Lead.....	4.5
Nickel <sup>(+)</sup> .....	$1 + (0.49(SS)^{0.4281})$ 1.1
Zinc.....	2.1

<sup>(+)</sup> ~~SS = total suspended solids in mg/L.~~

(b) Chronic WLAs for discharges to the Great Lakes and inland lakes shall be developed for a toxic substance as follows:

$$WLA = (Zt)(1 + Q) - (Cr)(Q)$$

or

$$WLA = (Zd)(T)(1 + Q) - (Cr)(Q)$$

Where:

Zt = the lowest water quality value developed for the toxic substance expressed as total or total recoverable.

Zd = water quality value for aquatic life expressed as dissolved metal. Values expressed as dissolved, but for which a translator (T) is not available, shall be expressed as total or total recoverable for purposes of this subdivision.

T = dissolved to total translator for aquatic life wasteload allocations. For the metals in Table 2, T equals the given value or one derived from site-specific data. For the metals not listed in Table 2, T is equal to a translator derived by the department when sufficient information is available or from site-specific data.

$Q$  = number of parts receiving water allocated for mixing under R 323.1082(5).

Cr = receiving water background concentration of the toxic substance developed under R 323.1207(1)(g).

The lowest of the WLAs developed under this subdivision for the chronic aquatic life, human health, or wildlife values for each toxic substance shall be the basis for the WQBEL as specified in R 323.1211(4)(a).

(2) If the receiving water background concentration (Cr) of a toxic substance exceeds the most stringent applicable water quality value for that substance, then the WLA shall be established equal to such THE MOST STRINGENT water quality values, unless the provisions of R 323.1211(7)(d) allow for a different approach.

(3) WLAs based upon acute aquatic life protection shall not exceed the final FOLLOWING acute value developed under R 323.1057 WLA, unless it can be demonstrated to the department that a higher level is acceptable under

R 323.1082(1):

$WLA = (AT)$

OR

$WLA = (AD)(T)$

WHERE

AT = THE FINAL ACUTE VALUE DEVELOPED FOR THE TOXIC SUBSTANCE UNDER R 323.1057 EXPRESSED AS TOTAL OR TOTAL RECOVERABLE.

AD = FINAL ACUTE VALUE FOR AQUATIC LIFE EXPRESSED AS DISSOLVED METAL UNDER R 323.1057. VALUES EXPRESSED AS DISSOLVED, BUT FOR WHICH A TRANSLATOR (T) IS NOT AVAILABLE, SHALL BE EXPRESSED AS TOTAL OR TOTAL RECOVERABLE FOR PURPOSES OF THIS SUBDIVISION.

T = DISSOLVED TO TOTAL TRANSLATOR FOR AQUATIC LIFE WASTELOAD ALLOCATIONS. FOR THE METALS IN TABLE 2, T EQUALS THE GIVEN VALUE OR ONE DERIVED FROM SITE-SPECIFIC DATA. FOR THE METALS NOT LISTED IN TABLE 2, T IS EQUAL TO A TRANSLATOR DERIVED BY THE DEPARTMENT WHEN SUFFICIENT INFORMATION IS AVAILABLE OR FROM SITE-SPECIFIC DATA.

(4) When establishing WLAs based on human health values for individual point source discharges, the potential interaction between multiple toxic substances in the effluent shall be addressed by the following provisions:

(a) If an effluent contains carcinogens for which available scientific information supports a reasonable assumption that the toxic substances produce the same type of cancer through the same mechanism of action and for which WQBELs are required pursuant to R 323.1211 on an individual basis, then the total incremental risk created by the effluent in the surface waters of the state after mixing with the allowable receiving water body volume specified in R 323.1082 shall not exceed  $1 \times 10^{-5}$  for individual carcinogens and  $1 \times 10^{-4}$  for the total effluent. This additivity provision shall be implemented on a case-by-case basis and shall be evaluated at each facility independent of other carcinogens that may be present in the receiving water.

(b) If an effluent contains 2 or more noncarcinogens for which available scientific information supports a reasonable assumption that the toxic substances produce the same adverse effects through the same

mechanisms of action and for which WQBELs are required under R 323.1211 on an individual basis, then the noncarcinogenic effects of the chemicals may be assumed additive and considered by the department when calculating WLAs protective of human health. This subdivision shall be implemented on a case-by-case basis and shall be evaluated at each facility independent of other noncarcinogens that may be present in the receiving stream.

(c) Notwithstanding the requirements in subdivisions (a) and (b) of this subrule, human health-based WLAs for the chlorinated dibenzo-p-dioxins (CDDs) and chlorinated dibenzofurans (CDFs) listed in table 2 shall be calculated using the following procedures:

(i) The human cancer value and human noncancer value for 2,3,7,8-TCDD shall be used consistent with the procedures in subrules (1) and (2) of this rule to calculate total 2,3,7,8-TCDD toxicity equivalence WLAs for effluents.

(ii) The toxicity equivalency factors (TEFs) and bioaccumulation equivalency factors (BEFs) in table 2 shall be used to calculate a 2,3,7,8-TCDD toxicity equivalence concentration for an effluent when implementing the WLAs derived in paragraph (i) of this subdivision. The equation for calculating the 2,3,7,8-TCDD toxicity equivalence concentration in an effluent is as follows:

$$(\text{TEC})_{\text{TCDD}} = \sum (\text{C})_x (\text{TEF})_x (\text{BEF})_x$$

Where:

$(\text{TEC})_{\text{TCDD}}$  = 2,3,7,8-TCDD toxicity equivalence concentration in the discharge.

$(\text{C})_x$  = the concentration of congener x in the discharge.

$(\text{TEF})_x$  = toxicity equivalency factor for congener x.

$(\text{BEF})_x$  = bioaccumulation equivalency factor for congener x.

Table 2 3. Toxicity Equivalency Factors and BEFs for CDDs and CDFs

Congener	TEF	BEF
2,3,7,8-TCDD	1.0	1.0
1,2,3,7,8-PeCDD	0.5	0.9
1,2,3,4,7,8-HxCDD	0.1	0.3
1,2,3,6,7,8-HxCDD	0.1	0.1
1,2,3,7,8,9-HxCDD	0.1	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.05
OCDD	0.001	0.01
2,3,7,8-TCDF	0.1	0.8
1,2,3,7,8-PeCDF	0.05	0.2
2,3,4,7,8-PeCDF	0.5	1.6
1,2,3,4,7,8-HxCDF	0.1	0.08
1,2,3,6,7,8-HxCDF	0.1	0.2
2,3,4,6,7,8-HxCDF	0.1	0.7
1,2,3,7,8,9-HxCDF	0.1	0.6
1,2,3,4,6,7,8-HpCDF	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.4
OCDF	0.001	0.02

**R 323.1211 Reasonable potential for chemical-specific water quality-based effluent limits (WQBELs).**

Rule 1211. (1) Chemical-specific water quality-based effluent limits (WQBELs) shall be incorporated into a national pollutant discharge elimination system (NPDES) permit where the department determines that a toxic substance is or may be discharged into the waters of the state at a level that has the reasonable potential to cause or contribute to an excursion above any water quality value. The determination shall be made by developing preliminary effluent limitations (PELs) and comparing the effluent limitations to the potential effluent quality (PEQ) of the discharge.

(2) PELs shall be developed for each toxic substance that the permittee reports as known or believed to be present in its discharge using the wasteload allocation (WLA) provisions specified in R 323.1207 or R 323.1209. At a minimum, PELs are required and shall be developed for the protection of aquatic life and noncancer human health effects where aquatic life values, human noncancer values, or the minimum data to calculate the aquatic life or human noncancer values are available. If there are insufficient data to calculate aquatic life or human noncancer values, then the department shall follow the provisions in subrule (6) of this rule. PELs shall also be developed for the protection of wildlife and human health cancer effects where human cancer values, wildlife values, or the minimum data to calculate human cancer or wildlife values are available.

(3) The PEQs shall be determined by either of the following procedures:

(a) If ~~at least~~ 10 OR MORE representative facility-specific effluent samples are available that are greater than the detection limit, then the maximum PEQ shall equal the upper ninetififth percentile of all the representative daily discharge concentrations and the average PEQ shall equal the upper ninetififth percentile of all the representative 30-day average discharge concentrations. The upper ninetififth percentile of the daily discharge concentrations and 30-day average discharge concentrations shall be calculated as follows:

$$P_{95} = \exp(\mu_{dn} + Z_p \sigma_{dn})$$

Where:

$P_{95}$  = upper ninetififth percentile of n-day average discharge concentrations.

$d$  = ratio of the number of daily discharge concentrations less than the limit of detection to the total number of discharge concentrations.

$n$  = number of discharge concentrations used to calculate an average over a specified monitoring period ( $n=1$  for daily concentrations and 30 for 30-day averages).

$\exp$  = base e (or approximately 2.718) raised to the power shown between the parentheses in the  $P_{95}$  equation.

$Z_p$  = Z value corresponding to the upper  $p^{\text{th}}$  percentile of the standard normal distribution.

$$p = (0.95 - d^n) / (1 - d^n).$$

$$\mu_{dn} = \mu_d + \frac{(\sigma_d)^2 - (\sigma_{dn})^2}{2} + \ln \frac{(1 - d)}{(1 - d^n)} = \text{estimated log mean of n-day average discharge}$$

concentrations greater than the limit of detection. (Note:  $\mu_{dn} = \mu_d$  if  $n = 1$ ).

$$(\sigma_{dn})^2 = \ln \left[ (1 - d^n) \left( \frac{1 + \left( \frac{s}{m} \right)^2}{n(1 - d)} + \frac{n - 1}{n} \right) \right] = \text{estimated log variance of n-day average discharge}$$

concentrations greater than the limit of detection. (Note:  $(\sigma_{dn})^2 = (\sigma_d)^2$  if  $n = 1$ ).

$\mu_d = \ln m - 0.5 (\sigma_d)^2$  = estimated log mean of discharge concentrations greater than the limit of detection.

$(\sigma_d)^2 = \ln [1 + (s/m)^2]$  = estimated log from variance of discharge concentrations greater than the limit of detection.

$\ln$  = natural logarithm.



m = mean of discharge concentrations greater than the limit of detection.

s = standard deviation of discharge concentrations greater than the limit of detection.

Reasonable potential for the discharge of a toxic substance to cause or contribute to an excursion above any water quality value will be considered to exist if the average or maximum PEQ exceeds any of the chronic or acute PELs, respectively, developed in accordance with subrule (2) of this rule.

(b) If sufficient data are not available to use the process described in subdivision (a) of this subrule, then the PEQ shall be determined by identifying the total number of representative effluent samples, both detectable and nondetectable, and multiplying the maximum effluent concentration by the appropriate factor from table 3.4 developed by assuming a 0.6 coefficient of variation. Reasonable potential for the discharge of a toxic substance to cause or contribute to an excursion above any water quality value will be considered to exist if the PEQ exceeds any of the PELs developed in accordance with subrule (2) of this rule. For purposes of this subdivision, the department shall consider other scientifically defensible approaches on a case-by-case basis which are consistent with procedure 5.B.2.1 of Appendix F, 40 C.F.R. Part 132 (1995), WHICH IS ADOPTED BY REFERENCE IN R 323.1221, for use in determining reasonable potential. If requested by the permittee, one such approach that is acceptable to the department is the prediction level concept specified in Gibbons, 1994, Statistical Methods for Groundwater Monitoring - Wiley, New York where representative effluent data appropriate for use with this method is provided. If the prediction level approach is proposed for use with data sets containing values both above and below the detection level, then a process to address the less than detection values, that is acceptable to the department, shall be provided by the permittee.

Table 3.4. Reasonable Potential Multiplying Factors:  
95% Confidence Level and 95% Probability Basis

Number of Samples

	1	2	3	4	5	6	7	8	9	
Multiplying Factor	6.2	3.8	3.0	2.6	2.3	2.1	2.0	1.9	1.8	
	10	11	12	13	14	15	16	17	18	19
	1.7	1.7	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.4
	20	30	40	50	60	70	80	90	100	
	1.4	1.2	1.1	1.0	1.0	0.9	0.9	0.9	0.9	

(4) If the analysis in subrule (3) of this rule demonstrates that the toxic substance concentration has a reasonable potential to cause or contribute to an excursion above any water quality value, then a WQBEL or WQBELs shall be established in the permit. For the purpose of an NPDES permit, a chronic or acute WLA based on a water quality value shall be equal to a WQBEL and shall be expressed using the following permit averaging periods:

(a) Chronic WLAs for the protection of aquatic life, human health, and wildlife shall be expressed as monthly average WQBELs.

(b) Acute WLAs for the protection of aquatic life shall be expressed as daily maximum WQBELs.

Monitoring frequency to evaluate compliance with WQBELs shall be established by the department on a case-by-case basis.

(5) Monthly average WQBELs shall be expressed as both a concentration value and a corresponding mass load. The mass and concentration limits shall be calculated using the same facility design flows. Appropriate adjustments may be made to address facilities that receive wet-weather flows. DAILY MAXIMUM WQBELS SHALL BE EXPRESSED AS BOTH A CONCENTRATION VALUE AND A CORRESPONDING MASS LOAD FOR THOSE SUBSTANCES IDENTIFIED IN R 323.1205(U)(II) AND OTHER TOXIC SUBSTANCES AS APPROPRIATE.

(6) For each toxic substance which a permittee reports as known or believed to be present in its discharge, and for which data sufficient to calculate tier II values for noncancer human health and aquatic life do not exist, all of the following provisions apply:

(a) The department shall use all available, relevant toxicity information to estimate ambient screening values for the toxic substance that will protect humans from noncancer health effects and aquatic life from acute and chronic effects.

(b) Using the provisions specified in R 323.1209, the department shall develop PELs based on the estimated ambient screening value and compare the PELs with the PEQ. If the PEQ exceeds any of the PELs, then the department shall generate, or require the permittee to generate, the minimum data necessary to derive tier II values for noncancer human health and aquatic life.

(c) The data generated in accordance with subdivision (b) of this subrule shall be used to calculate water quality values. The values shall be used in calculating the PELs pursuant to subrule (2) of this rule for the purpose of determining whether a WQBEL must be included in the permit. If the department finds that the PEQ exceeds the PEL, then a WQBEL for the toxic substance shall be established in the permit consistent with R 323.1211.

(7) All of the following conditions apply when considering intake toxic substances in establishing limitations in NPDES permits:

(a) The department may determine that there is no reasonable potential for the discharge of an identified intake toxic substance to cause or contribute to an excursion above any water quality value if a discharger demonstrates, to the satisfaction of the department, or the department determines, all of the following:

(i) The facility withdraws 100% of the intake water containing the toxic substance from the same body of water into which the discharge is made.

(ii) The facility does not contribute a measurable increased mass of the identified intake toxic substance to its wastewater.

(iii) The facility does not alter the identified intake toxic substance chemically or physically in a manner that would cause adverse water quality impacts to occur that would not occur if the toxic substances were left in-stream.

(iv) The facility does not increase the identified intake toxic substance concentration, as defined by the department, at the edge of the mixing zone or if a mixing zone is not allowed at the point of discharge, as compared to the toxic substance concentration in the intake water, unless the increased concentration does not cause or contribute to an excursion above an applicable water quality standard.

(v) The timing and location of the discharge would not cause adverse water quality impacts to occur that would not occur if the identified intake toxic substance were left in-stream.

(b) If there is a finding under subdivision (a) of this subrule that a toxic substance in the discharge does not have the reasonable potential to cause or contribute to an excursion above a water quality value, then a WQBEL is unnecessary and the permit may require monitoring necessary to demonstrate that the conditions in subdivision (a) of this subrule are maintained during the permit term. Unique situations for commingled waste streams at facilities will be addressed on a case-by-case basis.

(c) Absent a finding under subdivision (a) of this subrule, the department shall use the procedures described in subrules (2) through (5) of this rule to determine whether a discharge has the reasonable potential to cause or contribute to an excursion above any water quality value.

(d) If the background receiving water concentration of the intake toxic substance of concern exceeds the most stringent applicable water quality value for that toxic substance, then all of the following provisions apply:

(i) If the facility meets the conditions in subdivision (a)(i) and (iii) to (v) of this subrule, then a no net addition limit may be established for the toxic substance of concern at a mass and concentration that are no greater than the mass and concentration of the toxic substance identified in the facility's intake water. In determining whether there has been an addition, recognized statistical concepts shall be considered. For toxic substances contained in the intake water provided by a water system, the concentration of the intake toxic substance shall be determined at the point where the raw water is removed from the same body of water, except that it shall be the point where the water enters the water supplier's distribution system where the water treatment system removes any of the identified toxic substances from the raw water supply. Mass shall be determined by multiplying the concentration of the toxic substance by the volume of the facility's intake flow received from the water system. Following establishment of a TMDL developed under R 323.1207 for the water body segment encompassing the facility, any use of no net addition limits shall be consistent with the TMDL.

Note: The Water Quality Guidance for the Great Lakes System, 40 C.F.R. Part 132 (1995), WHICH IS ADOPTED BY REFERENCE IN R 323.1221, indicates that a permit may not authorize no net addition limits that are effective after March 23, 2007. The preamble to 40 C.F.R. Part 132 indicates that the Environmental Protection Agency (EPA) will revisit this requirement by March 23, 2002, to consider possible extensions. After the redetermination by EPA, the department will consider modifying these rules to incorporate a phaseout date for no net addition limits, if still necessary.

(ii) If the intake toxic substance in a facility's discharge originates from a water that is not the same body of water as the receiving water, then WQBELs shall be established based upon the most stringent water quality value for that toxic substance.

(iii) If a facility discharges an intake toxic substance that originates in part from the same body of water, and in part from a different body of water, then the department may apply the conditions of paragraphs (i) and (ii) of this subdivision to derive an effluent limitation reflecting the flow-weighted average of each source of the toxic substance.

### **R 323.1213 WQBELs less than quantification level.**

Rule 1213. (1) If a water quality-based effluent limit (WQBEL) for a toxic substance is calculated to be less than the quantification level, then all of the following provisions apply:

(a) The department shall designate, in the national pollutant discharge elimination system (NPDES) permit, the WQBEL as calculated.

(b) The permit shall state, for the purpose of compliance assessment, the analytical method to be used to monitor the amount of toxic substance in the effluent and the quantification level. The analytical method specified shall be the most sensitive, applicable, analytical method specified in or approved under the pollutant testing regulations set forth in 40 C.F.R. §136 (1995 2000), WHICH ARE ADOPTED BY REFERENCE IN R 323.1221, or other appropriate method that provides confirmation and verification acceptable to the department if one is not available under

40 C.F.R. §136 (1995 2000). The permit shall also state that if an effluent sample is less than the quantification level, then the permittee shall be considered in compliance for the period that the sample represents if the

POLLUTANT MINIMIZATION PROGRAM (PMP) described in subdivision (d) of this subrule is being fully performed.

(c) The quantification level shall be the minimum level (ML) specified in, or approved under, 40 C.F.R. §136 (1995 2000), WHICH ARE ADOPTED BY REFERENCE IN R 323.1221, for the method for that toxic substance. If ~~no~~ such ML DOES NOT exists, or if the method is not specified or approved under 40 C.F.R. §136 (1995 2000), then the quantification level shall be the lowest quantifiable level practicable as established by procedures approved by the department. When establishing a quantification level, the department shall consider the achievability of the value by competent commercial laboratories. The permittee shall be given the opportunity to demonstrate that a higher quantification level is appropriate because of sample matrix interference.

(d) The permit shall contain a special condition requiring the permittee to develop and conduct a ~~pollutant minimization program (PMP)~~ for each toxic substance with a WQBEL below the quantification level, unless the permittee can demonstrate to the department that an alternate technique is available AND WILL BE USED to assess compliance with the WQBEL. The goal of the PMP shall be to maintain the effluent concentration of the toxic substance at or below the WQBEL. The department shall consider cost-effectiveness during the development and implementation of a PMP. The permit shall require the submittal of a PMP by the permittee that describes the control strategy designed to proceed toward achievement of the goal and shall include all of the following:

- (i) An annual review and ~~periodic~~ SEMIANNUAL monitoring of potential sources of the toxic substance.
- (ii) ~~Periodic~~ QUARTERLY monitoring for the toxic substance in the influent to the wastewater treatment system.
- (iii) A commitment by the permittee that reasonable cost-effective control measures will be implemented when sources of the toxic substance are discovered. Factors to be considered shall include all of the following:
  - (A) Significance of sources.
  - (B) Economic considerations.
  - (C) Technical and treatability considerations.
- (iv) An annual status report. The report shall be sent to the department and shall include all of the following:
  - (A) All minimization program monitoring results for the previous year.
  - (B) A list of potential sources of the toxic substance.
  - (C) A summary of all actions taken to reduce or eliminate the identified sources of the toxic substance.

The requirements of paragraphs (i) to (iv) of this subdivision may be modified by the department on a case-by-case basis.

(e) The permit may contain a special condition requiring fish tissue monitoring or other biouptake sampling, or both, or facility sludge monitoring to assess the progress of the PMP.

(f) The permit shall contain a reopener clause indicating that any information generated as a result of the PMP described in subdivision (d) of this subrule may be used to support a request for subsequent permit modification, including revision or removal of the PMP requirement.

(g) The quantification level specified in a NPDES permit pursuant to this rule shall remain in effect until the permit is modified or reissued. If the quantification level is reduced through a permit modification or reissuance, then the permittee may be eligible for a compliance schedule under R 323.1217 and a variance under R 323.1103.

### **R 323.1217 Compliance schedules.**

Rule 1217. (1) If a permit issued to a new discharger contains a water quality-based effluent limitation (WQBEL) for a toxic substance, then the permittee shall comply with the limitation upon commencement of the

discharge. Compliance schedules may be granted for new or more stringent WQBELs contained in a modification to the permit or subsequently issued permits.

(2) Any existing permit that is reissued or modified to contain a new or more restrictive WQBEL for a toxic substance or a lower quantification level established under R 323.1213 may allow a reasonable period of time, up to 5 years from the date of permit issuance or modification, for the permittee to comply with the new or more restrictive WQBEL or lower quantification level. ~~A compliance schedule may go beyond the term of a permit when necessary and shall set forth interim requirements and dates for achievement of the requirements, as appropriate.~~ WHEN A COMPLIANCE SCHEDULE GOES BEYOND THE TERM OF A PERMIT, AN INTERIM PERMIT LIMIT SHALL BECOME EFFECTIVE ON OR BEFORE THE PERMIT EXPIRATION DATE.

(3) If a permit establishes a schedule of compliance under subrule (2) of this rule that exceeds 1 year from the date of permit issuance or modification, then the schedule shall set forth interim requirements and dates for achievement of the requirements, as appropriate.

(4) If a WQBEL for a toxic substance based upon a tier II value derived under R 323.1057 is included in a reissued or modified permit for an existing discharger, then the permit shall provide a reasonable period of time, up to 2 years, in which to provide additional data necessary to develop a tier I value or to modify the tier II value. Information submitted to modify the tier II value may also include site-specific data and any such site-specific modifications shall be calculated according to the site-specific modification requirements of R 323.1057. The permit shall require compliance with the tier II limitation within a reasonable period of time, which shall not be more than 5 years after permit issuance or modification, and shall contain a reopener clause.

(5) The reopener clause specified in subrule (4) of this rule shall authorize permit modifications if additional data have been provided by the permittee or a third party during the time allowed to provide the data and if the permittee or a third party demonstrates that a revised WQBEL for a toxic substance is appropriate. The revised WQBEL shall be incorporated through a permit modification and a reasonable time period, up to 5 years from the date of modification, shall be allowed for compliance. If incorporated before the compliance date of the original tier II limitation, any such revised WQBEL shall not be considered less stringent for purposes of the antibacksliding provisions of section 402(o) of the clean water act (CWA).

(6) If the specified studies have been completed and do not demonstrate that a revised WQBEL is appropriate, then the department shall provide a reasonable additional period of time, not to exceed 5 years, to achieve compliance with the original WQBEL.

(7) If future studies other than those conducted under subrule (4) of this rule result in a water quality value being changed to a less stringent value, after the effective date of a WQBEL for that substance, the existing WQBEL may be revised to be less stringent if 1 of the following provisions is met:

(a) The less stringent WQBEL complies with sections 402(o)(2) and (3) of the clean water act.

(b) The less stringent WQBEL complies with water quality standards or is consistent with a department-approved total maximum daily load in nonattainment waters.

(c) The less stringent WQBEL complies with R 323.1098 in attained waters.

### **R 323.1219 Whole effluent toxicity.**

Rule 1219. (1) For the purpose of evaluating the need for whole effluent toxicity (WET) limits or conditions in point source discharges, the narrative WET standard specified in R 323.1057(6) shall be interpreted as follows:

(a) An effluent shall not exceed 1.0 acute toxic unit (TU<sub>a</sub>), unless a higher level is acceptable consistent with R 323.1082(1).

(b) An effluent shall not cause or contribute to an exceedance of 1.0 chronic toxic unit (TU<sub>c</sub>) in the surface waters of the state outside of any department-approved mixing zone.

(2) If the department determines under subrule (4) of this rule that the ~~whole effluent toxicity (WET)~~ of an effluent is or may be discharged at a level that will cause or contribute to an excursion above the narrative WET standard specified in R 323.1057(6), then the department shall implement all of the following provisions:

(a) Establish a WET limitation or limitations consistent with subrule (5) of this rule, except as provided in subdivision (d) of this subrule, to assure both of the following:

(i) Attainment of the acute WET provisions of subrule (1)(a) of this rule.

(ii) Attainment of the chronic WET provisions of subrule (1)(b) of this rule.

(b) Specify, in the national pollutant discharge elimination system (NPDES) permit for existing dischargers, on a case-by-case basis, a requirement to perform a toxicity reduction evaluation if representative toxicity data indicate persistent exceedance of the WET limitation.

(c) Allow, with respect to any WET limitation established under subdivision (a) of this subrule, an appropriate schedule of compliance consistent with R 323.1217.

(d) Decide, on a case-by-case basis, if a WET limitation is not necessary if the department determines that chemical-specific effluent limits are sufficient to ensure compliance with any of the conditions specified in subrule (1) of this rule.

(3) If the department has insufficient information to determine, under subrule (4) of this rule, whether the WET of an effluent will be discharged at a level that will cause or contribute to an excursion above the narrative WET standard specified in R 323.1057(6), then both of the following may be included in the permit:

(a) WET testing requirements to generate the data needed to adequately characterize the toxicity of the effluent to aquatic life and any toxicity reduction requirements needed to meet the requirement of subrule (1) of this rule.

(b) A permit reopener clause to establish WET limits if any toxicity testing data required under subdivision (a) of this subrule indicate that the WET of an effluent is discharged at levels that will cause or contribute to an excursion above any of the conditions specified in subrule (1) of this rule.

(4) The department shall take into account the factors described in the permit condition regulations set forth in 40 C.F.R. §122.44(d)(1)(ii), WHICH ARE ADOPTED BY REFERENCE IN R 323.1221, and use representative data to evaluate the WET of an effluent. All of the following provisions for evaluating the reasonable potential of an effluent to exceed the requirements of R 323.1057(6) shall be applied:

(a) The toxicity of the effluent shall be characterized consistent with all of the following provisions:

(i) ~~THE RESULTS OF Acute toxicity values TESTS~~ collected within the same day for each species shall be averaged to represent 1 daily value. The ~~average~~ MAXIMUM of all representative daily values for the most sensitive species tested shall be used for acute reasonable potential determinations.

(ii) ~~THE RESULTS OF Chronic toxicity values TESTS~~ collected within the same calendar month for each species shall be averaged to represent 1 monthly value. The ~~average~~ MAXIMUM of all representative monthly values for the most sensitive species tested shall be used for chronic reasonable potential determinations.

(iii) If data exist for either acute WET or chronic WET, but not for both endpoints, then toxicity values for missing endpoints may be estimated using a default acute-chronic ratio (ACR) of 10.

(iv) For purposes of ~~averaging~~ DERIVING the DAILY acute and MONTHLY chronic values in paragraphs (i) and (ii) of this subdivision, ~~the department may assign TU<sub>a</sub> and TU<sub>c</sub> values less than 1.0 to toxicity tests that do not yield LC<sub>50</sub>, MATC, or IC<sub>25</sub> values~~ QUANTIFIABLE RESULTS (E.G. >= 1.0 TU<sub>A</sub> or TU<sub>C</sub>) SHALL BE ASSIGNED A VALUE OF ZERO.

(b) The WET of an effluent is or may be discharged at a level that will cause or contribute to an excursion above the acute narrative standard specified in R 323.1057(6) when: ~~the average measured acute toxicity of the effluent from subdivision (a)(i) of this subrule exceeds the preliminary acute WET limitation derived for the facility under subrule (5)(c) of this rule.~~

(TU<sub>A</sub> EFFLUENT)(MF) > ACUTE PEL,

WHERE:

"TU<sub>A</sub> EFFLUENT" IS THE MAXIMUM OF THE DAILY VALUES DETERMINED PURSUANT TO SUBDIVISION (a)(i) OF THIS SUBRULE.

"MF" IS THE MULTIPLYING FACTOR DETERMINED USING THE ACUTE TOXICITY TEST RESULTS FOR THE MOST SENSITIVE SPECIES AS SPECIFIED IN SUBDIVISION (A)(I) OF THIS SUBRULE. IF NONE OF THE ACUTE TOXICITY TESTS YIELD QUANTIFIABLE RESULTS, THEN THE MF SHALL BE 1. WHERE THERE IS AT LEAST 1 BUT FEWER THAN 10 ACUTE TOXICITY TESTS WITH QUANTIFIABLE RESULTS, THE MULTIPLYING FACTOR TAKEN FROM TABLE 5 SHALL BE BASED ON A COEFFICIENT OF VARIATION (CV) OF 0.6. WHERE THERE ARE 10 OR MORE ACUTE TOXICITY TESTS WITH QUANTIFIABLE RESULTS, THE MULTIPLYING FACTOR TAKEN FROM TABLE 5 SHALL BE BASED ON A CV CALCULATED AS THE STANDARD DEVIATION OF THE ACUTE TOXICITY TEST RESULTS DIVIDED BY THE ARITHMETIC MEAN OF THOSE TEST RESULTS. FOR THE PURPOSE OF SELECTING A MF FROM TABLE 5, "N" SHALL EQUAL THE TOTAL NUMBER OF QUANTIFIABLE AND NONQUANTIFIABLE ACUTE TOXICITY TEST RESULTS. FOR THE PURPOSE OF DEVELOPING A CALCULATED CV, ACUTE TOXICITY TESTS THAT DO NOT YIELD QUANTIFIABLE RESULTS SHALL EQUAL 1.0 TUA. IF THE CALCULATED CV IS  $\leq 0.05$ , THEN THE MF SHALL BE 1.

"ACUTE PEL" IS THE PRELIMINARY ACUTE WET LIMITATION DERIVED FOR THE FACILITY UNDER SUBRULE (5)(c) OF THIS RULE.

(c) The WET of an effluent is or may be discharged at a level that will cause or contribute to an excursion above the chronic narrative standard specified in R 323.1057(6)(b) when: ~~the average measured chronic toxicity of the effluent from subdivision (a)(ii) of this subrule exceeds the preliminary chronic WET limitations derived for the facility under subrule (5)(a) or (b) of this rule.~~

$(TU_C \text{ EFFLUENT})(MF) > \text{CHRONIC PEL}$

WHERE:

"TU<sub>C</sub> EFFLUENT" IS THE MAXIMUM OF THE MONTHLY VALUES DETERMINED PURSUANT TO SUBDIVISION (a)(ii) OF THIS SUBRULE.

"MF" IS THE MULTIPLYING FACTOR DETERMINED USING THE CHRONIC TOXICITY TEST RESULTS FOR THE MOST SENSITIVE SPECIES AS SPECIFIED IN SUBDIVISION (A)(II) OF THIS SUBRULE. IF NONE OF THE CHRONIC TOXICITY TESTS YIELD QUANTIFIABLE RESULTS, THEN THE MF SHALL BE 1. WHERE THERE IS AT LEAST 1 BUT FEWER THAN 10 CHRONIC TOXICITY TESTS WITH QUANTIFIABLE RESULTS, THE MULTIPLYING FACTOR TAKEN FROM TABLE 5 SHALL BE BASED ON A COEFFICIENT OF VARIATION (CV) OF 0.6. WHERE THERE ARE 10 OR MORE CHRONIC TOXICITY TESTS WITH QUANTIFIABLE RESULTS, THE MULTIPLYING FACTOR TAKEN FROM TABLE 5 SHALL BE BASED ON A CV CALCULATED AS THE STANDARD DEVIATION OF THE CHRONIC TOXICITY TEST RESULTS DIVIDED BY THE ARITHMETIC MEAN OF THOSE TEST RESULTS. FOR THE PURPOSE OF SELECTING A MF FROM TABLE 5, "N" SHALL EQUAL THE TOTAL NUMBER OF QUANTIFIABLE AND NONQUANTIFIABLE CHRONIC TOXICITY TEST RESULTS. FOR THE PURPOSE OF DEVELOPING A CALCULATED CV, CHRONIC TOXICITY TESTS THAT DO NOT YIELD QUANTIFIABLE RESULTS SHALL EQUAL 1.0 TUC. IF THE CALCULATED CV IS  $\leq 0.05$ , THEN THE MF SHALL BE 1.

"CHRONIC PEL" IS THE PRELIMINARY CHRONIC WET LIMITATION DERIVED FOR THE FACILITY UNDER SUBRULE (5)(a) OR (b) OF THIS RULE.

(d) The WET of a new discharge shall be evaluated on a case-by-case basis considering all information available on the potential toxicity of the proposed discharge.

(5) WET limitations shall be developed using all of the following provisions:

(a) Chronic WET limitations for discharges to lotic waters shall be developed as follows:

$$\text{WET limit} = \frac{W (Q_e + Q_r)}{Q_e}$$

$Q_e$

Where:

W = the condition specified in subrule (1)(b) of this rule.

$Q_e$  = effluent design flow, which is the annual average design flow for municipalities and maximum authorized flow for other facilities, unless it can be demonstrated to the department that an alternate design flow is appropriate.

$Q_r$  = flow of the receiving water allocated for mixing under R 323.1082. If a discharger has an intake upstream of the point of discharge, then  $Q_r$  shall reflect the reduction in design flow attributable to the intake.

(b) Chronic WET limitations for discharges to the Great Lakes and inland lakes shall be developed as follows:

$$\text{WET limit} = (W)(Q + 1)$$

Where:

W = the condition specified in subrule (1)(b) of this rule.

Q = the number of parts receiving water allowed for mixing under R 323.1082(5).

(c) Acute WET limitations shall not exceed the condition specified in subrule (1)(a) of this rule.

(d) WET limitations for facilities with overlapping mixing zones shall be evaluated on a case-by-case basis.

(e) For purposes of an NPDES permit, WET limitations shall be expressed as follows:

(i) An acute WET limitation shall be applied as a daily maximum and expressed in  $TU_a$ .

(ii) A chronic WET limitation shall be applied as a monthly average and expressed in  $TU_c$ .

(6) Monitoring frequency to evaluate compliance with WET limitations shall be established by the department on a case-by-case basis. Concerns with the effects of temperature and pH on ammonia toxicity under laboratory conditions during cold weather months will be considered in establishing monitoring frequency.

(7) All WET tests performed to implement or ascertain compliance with this rule shall be consistent with methods established in 40 C.F.R. Part 136 (~~1995~~ 2000), WHICH ARE ADOPTED BY REFERENCE IN R 323.1221. Methods approved by the department shall be used when appropriate WET methods are not specified in 40 C.F.R. Part 136 (~~1995~~ 2000).



Table 4 5. Reasonable Ppotential Mmultiplying Ffactors: 95% Cconfidence Llevel and 95% Pprobability Bbasis

N	Coefficient of Variation																			
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
1	-	-	-	-	-	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	1.1	1.2	1.3	1.5	1.6	1.7	1.9	2.0	2.2	2.3	2.4	2.6	2.7	2.8	3.0	3.1	3.2	3.3	3.4	3.6
11	1.1	1.2	1.3	1.4	1.6	1.7	1.8	1.9	2.1	2.2	2.3	2.4	2.5	2.7	2.8	2.9	3.0	3.1	3.2	3.3
12	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.0
13	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.5	2.6	2.7	2.8	2.9
14	1.1	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.3	2.4	2.5	2.6	2.6	2.7
15	1.1	1.2	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.8	1.9	2.0	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.5
16	1.1	1.1	1.2	1.3	1.4	1.5	1.6	1.6	1.7	1.8	1.9	1.9	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.4
17	1.1	1.1	1.2	1.3	1.4	1.4	1.5	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.0	2.1	2.2	2.2	2.3	2.3
18	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.2
19	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.5	1.6	1.6	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.1
20	1.1	1.1	1.2	1.2	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.0
30	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5
40	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3
50	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
60	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
70	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
80	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
90	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
100	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7

**R 323.1221 Adoption of standards by reference.**

Rule 1221. All of the following standards are adopted by reference in these rules, are available for inspection at the Lansing Office of the Department of Environmental Quality, and may be obtained as indicated:

(a) “EPA Priority Pollutants and Hazardous Substances,” 40 C.F.R. §122.21, Appendix D (1995 2000). Copies may be obtained from the Department of Environmental Quality, P.O. Box 30273 525 WEST ALLEGAN STREET, Lansing, Michigan 48909-7773 48933, at a cost as of the time of adoption of these rules of 5 cents per page and a labor rate of \$17.07 \$19.78 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of \$41.00 \$66.00, OR VIA THE INTERNET AT [HTTP://WWW.ACCESS.GPO.GOV/NARA](http://www.access.gpo.gov/nara).

(b) “Table 6. Pollutants of Initial Focus in the Great Lakes Water Quality Initiative,” 40 C.F.R. §132 (1995). Copies may be obtained from the Department of Environmental Quality, P.O. Box 30273 525 WEST ALLEGAN STREET, Lansing, Michigan 48909-7773 48933, at a cost as of the time of adoption of these rules of 5 cents per page and a labor rate of \$17.07 \$19.78 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of \$41.00 \$66.00, OR VIA THE INTERNET AT [HTTP://WWW.ACCESS.GPO.GOV/NARA](http://www.access.gpo.gov/nara).

(c) “Total maximum daily loads (TMDL) and individual water quality-based effluent limitations,” 40 C.F.R. §130.7 (1995 2000). Copies may be obtained from the Department of Environmental Quality, P.O. Box 30273 525 WEST ALLEGAN STREET, Lansing, Michigan 48909-7773 48933, at a cost as of the time of adoption

of these rules of 5 cents per page and a labor rate of ~~\$17.07~~ \$19.78 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of ~~\$41.00~~ \$66.00, OR VIA THE INTERNET AT [HTTP://WWW.ACCESS.GPO.GOV/NARA](http://www.access.gpo.gov/nara).

(d) “Appendix F to Part 132 - Great Lakes Water Quality Initiative Implementation Procedures, Procedure 5.B.2,” 40 C.F.R. §132 (1995). Copies may be obtained from the Department of Environmental Quality, ~~P.O. Box 30273~~ 525 WEST ALLEGAN STREET, Lansing, Michigan ~~48909-7773~~ 48933, at a cost as of the time of adoption of these rules of 5 cents per page and a labor rate of ~~\$17.07~~ \$19.78 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of ~~\$41.00~~ \$66.00, OR VIA THE INTERNET AT [HTTP://WWW.ACCESS.GPO.GOV/NARA](http://www.access.gpo.gov/nara).

(e) “Guidelines Establishing Test Procedures for Analysis of Pollutants,” 40 C.F.R. §136 et seq. (~~1995~~ 2000). Copies may be obtained from the Department of Environmental Quality, ~~P.O. Box 30273~~ 525 WEST ALLEGAN STREET, Lansing, Michigan ~~48909-7773~~ 48933, at a cost as of the time of adoption of these rules of 5 cents per page and a labor rate of ~~\$17.07~~ \$19.78 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of ~~\$41.00~~ \$47.00, OR VIA THE INTERNET AT [HTTP://WWW.ACCESS.GPO.GOV/NARA](http://www.access.gpo.gov/nara).

(f) “Establishing limitations, standards, and other permit conditions,” 40 C.F.R. §122.44(d)(1)(ii) (~~1995~~ 2000). Copies may be obtained from the Department of Environmental Quality, ~~P.O. Box 30273~~ 525 WEST ALLEGAN STREET, Lansing, Michigan ~~48909-7773~~ 48933, at a cost as of the time of adoption of these rules of 5 cents per page and a labor rate of ~~\$17.07~~ \$19.78 per hour, or from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of ~~\$41.00~~ \$66.00, OR VIA THE INTERNET AT [HTTP://WWW.ACCESS.GPO.GOV/NARA](http://www.access.gpo.gov/nara).

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**NOTICE OF PUBLIC HEARING**

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**ORR # 2001-002 & 2001-014**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**SURFACE WATER QUALITY DIVISION**

The Michigan Department of Environmental Quality (DEQ), Surface Water Quality Division, will conduct a public hearing on proposed administrative rules promulgated pursuant to Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); R 323.1201 to R 323.1221 (titled Part 4 Water Quality Standards, ORR 2001-002EQ), and R 323.1041 to R 323.1117 (titled Part 8 Water Quality-Based Effluent Limit Development for Toxic Substances, ORR 2001-014EQ). The Part 4 rules establish water quality requirements for surface waters of the state, to protect the public health and welfare, to enhance and maintain the quality of water, and to protect the state's natural resources. The Part 8 rules establish toxic substance water quality-based controls for the point source discharges that are protective of the designated uses of the surface waters of the state. Modifications to both rule sets are proposed to increase rule clarity, update citations and references, and achieve required consistency with federal regulations.

The public hearing will be held on June 26, 2002, at 1:00 p.m., in the Capital Area District Library, 401 South Capitol Avenue, Lansing, Michigan.

Copies of the proposed rules (ORR 2001-002EQ and 2001-014EQ) can be downloaded from the Internet through the Office of Regulatory Reform at <http://www.michigan.gov/orr>. Copies of the rules may also be obtained by contacting the Lansing office at:

Surface Water Quality Division  
Michigan Department of Environmental Quality  
P.O. Box 30273  
Lansing, Michigan 48909-7773  
Phone: 517-373-1320  
Fax: 517-241-8133  
E-Mail: [Heatons@michigan.gov](mailto:Heatons@michigan.gov)

All interested persons are invited to attend and present their views. It is requested that all statements be submitted in writing for the hearing record. Anyone unable to attend may submit comments in writing to the address above. Written comments must be received by 5:00 p.m. July 10, 2002.

Persons needing accommodations for effective participation in the meeting should contact the Surface Water Quality Division at 517-373-1320 one week in advance to request mobility, visual, hearing, or other assistance.

This notice of public hearing is given in accordance with Sections 41 and 42 of Michigan's Administrative Procedures Act, 1969 PA 306, as amended, being Sections 24.241 and 24.242 of the Michigan Compiled Laws. Administration of the rules is by authority conferred on the Director of the DEQ by Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451 and Executive Order 1995-18 . These rules will become effective seven days after filing with the Secretary of State.

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David A. Hamilton, Chief  
Surface Water Quality Division

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**PROPOSED ADMINISTRATIVE RULES**

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**ORR # 2001-071**

**DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES**

**DIRECTORS OFFICE**

**REAL ESTATE BROKERS AND SALESPERSONS**

Filed with the Secretary of State on  
These rules take effect September 1, 2002

(By authority conferred on the director of the department of consumer and industry services by sections 205, 308, and 2504 of 1980 P.A. 299, MCL 339.205, 339.308, and 339.2504 and Executive Reorganization Order No. 1996-2, MCL 445.2001)

R 339.22101, R 339.22103, R 339.22201, R 339.22203, R 339.22205, R 339.22207, R 339.22209, R 339.22211, R 339.22213, R 339.22215, R 339.22301, R 339.22305, R 339.22307, R 339.22309, R 339.22311, R 339.22313, R 339.22315, R 339.22317, R 339.22321, R 339.22323, R 339.22325, R 339.22329, R 339.22333, R 339.22337, R 339.22339, R 339.22401, R 339.22513, R 339.22515, R 339.22519, R 339.22523, R 339.22527, R 339.22601, R 339.22609, R 339.22613, R 339.22631, R 339.22651, R 339.22655, R 339.22659, and R 339.22663 of the Michigan Administrative Code are amended, R 339.22525, R 339.22633, R 339.22635, R 339.22637, and R 339.22661 of the Code are rescinded, and R 339.22310, R 339.22602, R 339.22604, R 339.22605, R 339.22606, and R 339.22654 are added to the Code as follows:

**PART 1. GENERAL PROVISIONS**

**R 339.22101 Definitions.**

Rule 101. (1) As used in these rules:

“ADVERTISING” MEANS ALL FORMS OF REPRESENTATION PROMOTION AND SOLICITATION DISSEMINATED IN ANY MANNER AND BY ANY MEANS OF COMMUNICATION TO CONSUMERS FOR ANY PURPOSE RELATED TO ACTIVITIES REGULATED UNDER ARTICLE 25 OF THE CODE.

(B) “ASSOCIATION” AS REFERRED TO IN SECTION 2505 (1) OF THE CODE INCLUDES A LIMITED LIABILITY COMPANY.

(C) ~~(a) “Clock-~~CLASSROOM hour” means a period of not less FEWER than 50 minutes of APPROVED EDUCATIONAL COURSES ~~actual classroom instruction~~, not including outside assignments and reading.

(D) “Code” means ~~Act 299 of the Public Acts of 1980, as amended, being 339.101 et seq. of the Michigan Compiled Laws.~~ 1980 PA 299, MCL 339.101 ET SEQ.

(E) ~~(e)~~ “Continuing education course” means a course that is represented as fulfilling the requirements of section 2504(4) of the code.

- (F) ~~(d)~~ "Coordinator" means the individual who assumes the responsibility under these rules for offering courses relating to the activities of real estate brokers or real estate salespersons.
- (G) ~~(e)~~ "Credit hour" means not ~~less~~ FEWER than 10 clock hours of APPROVED EDUCATIONAL COURSES. ~~actual-classroom-instruction.~~
- (H) ADISTANCE LEARNING" MEANS EITHER OF THE FOLLOWING:
- (i) APPROVED COURSES WHERE INSTRUCTOR AND STUDENT MAY BE APART AND INSTRUCTION TAKES PLACE THROUGH OTHER MEDIA.
  - (ii) APPROVED COURSES WHICH INCLUDE BUT ARE NOT LIMITED TO INSTRUCTION PRESENTED THROUGH INTERACTIVE CLASSROOMS, COMPUTER CONFERENCING, AND INTERACTIVE COMPUTER SYSTEMS AND WHICH FULFILL THE REQUIREMENTS OF SECTION 2504(4) OF THE CODE.
- (I) "DIRECTLY" MEANS IN A DIRECT WAY MARKED BY THE ABSENCE OF ANY INTERVENTION, INSTRUMENTALITY, OR INFLUENCE; NOT CONCEALED, NOT DISGUISED.
- (J) "ELECTRONIC COMMUNICATION" MEANS A COMMUNICATION CREATED, STORED, GENERATED, RECEIVED, OR TRANSMITTED BY ELECTRONIC MEANS IN A FORMAT THAT ALLOWS TEXT TO BE VISUALLY DISPLAYED OR PRINTED.
- (K) "INDIRECTLY" MEANS NOT RESULTING OR OCCURRING DIRECTLY FROM OBVIOUS MEANS OR CAUSE; REMOTELY CONNECTED, CONCEALED, OR DISGUISED.
- (L) ~~(f)~~ "Instructor" means an individual who possesses ~~either~~ ANY of the following qualifications:
- (i) Has not FEWER ~~less~~ than 2 years of full-time practical experience, or 2 years of postsecondary school education, in the specific area of real estate or related fields taught by the INSTRUCTOR ~~lecturer~~.
  - (ii) Has passed an examination for certification as an instructor ~~or lecturer~~ that is acceptable to ~~the board and the~~ department.
  - (iii) FOR DISTANCE LEARNING INSTRUCTION ONLY, BEFORE RECEIVING APPROVAL BY THE DEPARTMENT, AN INSTRUCTOR WHO MEETS THE CRITERIA IN PARAGRAPHS (I) OR (II) OF THIS SUBDIVISION SHALL ALSO PROVIDE DOCUMENTATION OF NOT FEWER THAN 2 YEARS OF TRAINING OR EDUCATION IN THE TECHNOLOGIES AND STRATEGIES FOR DELIVERING DISTANCE EDUCATION.
- (M) ~~(g)~~ "Licensee" means a person who is licensed under article 25 of the code.
- (N) "NON-PRINCIPAL ASSOCIATE BROKER," REFERENCED IN SECTION 2508 (4) AND 2509 (3) OF THE CODE, MEANS AN INDIVIDUAL WHO IS NOT A SOLE PROPRIETOR, AN OFFICER OR EQUITY OWNER, A MEMBER, MANAGER, OR GENERAL PARTNER, IN THE ASSOCIATION, PARTNERSHIP, CORPORATION, OR OTHER ENTITY AUTHORIZED BY THE STATE OF MICHIGAN UNDER WHICH THE BUSINESS IS ORGANIZED, AND WHO DOES NOT HOLD A POSITION OF AUTHORITY IN THE ENTITY.
- (O) "PRINCIPAL ASSOCIATE BROKER," REFERENCED IN SECTIONS 2508 AND 2509 OF THE CODE, MEANS AN INDIVIDUAL WHO IS A SOLE PROPRIETOR, MEMBER, MANAGER, GENERAL PARTNER, EQUITY OWNER, OR OFFICER OF THE CORPORATION, ASSOCIATION, GENERAL PARTNERSHIP, OR OTHER ENTITY AUTHORIZED BY THE STATE OF MICHIGAN UNDER WHICH THE BUSINESS IS ORGANIZED, AND WHO HOLDS A POSITION OF AUTHORITY IN THE ENTITY.
- (P) ~~(h)~~ "Prelicensure real estate course" or "prelicensure course" means a course that is represented to the public as fulfilling, in whole or in part, the requirements of section 2504 (1) and (2) of the code.

(Q) ~~(j)~~ “Real estate school” or “institution” means AN APPROVED ~~any~~ entity which represents to the public that any of its courses fulfill, in whole or in part, the requirements of section 2504 (1) and (2) of the code for prelicensure education. THIS ENTITY SHALL ALSO MEET THE REQUIREMENTS AS SET FORTH IN SECTION 2404 (8) OF THE CODE..

(R) ASERVICE PROVISION AGREEMENT” MEANS ANY AGREEMENT BETWEEN THE BROKER AND CLIENT WHICH ESTABLISHES AN AGENCY RELATIONSHIP. AN AGREEMENT MAY INCLUDE, BUT IS NOT LIMITED TO, ANY OF THE FOLLOWING:

A LISTING AGREEMENT.

A BUYERS AGENCY AGREEMENT.

A DESIGNATED AGENCY AGREEMENT.

A PROPERTY MANAGEMENT EMPLOYMENT CONTRACT.

(S) ~~(j)~~ “Sponsor” means an APPROVED PERSON, AS DEFINED IN section 105 (5) OF THE CODE ~~entity~~ which represents to the public that any of its courses fulfill the requirements of section 2504 (4) of the code for continuing education.

(T) “STUDENT” MEANS A MEMBER OF THE PUBLIC OR A LICENSEE WHO IS ATTENDING AN APPROVED COURSE DESIGNED TO FULFILL THE REQUIREMENTS OF SECTION 2504 OF THE CODE.

(U) ~~(k)~~ “Supervision” AS DEFINED IN R 339.22310 means the overseeing of, or participation in, the work of another LICENSED individual by a broker or PRINCIPAL associate broker. ~~in circumstances where, at minimum, all of the following conditions exist:~~

~~(i) Direct communication in person or by radio, telephone, or telecommunication between the supervised individual and a licensed broker or associate broker is available on a continuous basis.~~

~~(ii) A licensed broker or associate broker is available on a regularly scheduled basis to do all of the following:~~

~~(a) review the practice of the supervised individual.~~

~~(b) provide consultation to the supervised individual.~~

~~(c) review reports.~~

~~(d) further educate the supervised individual in the performance of the individual’s functions.~~

~~(iii) The licensed supervising broker or associated broker provides predetermined operating policies and procedures.~~

(V) “TRANSFER” MEANS A PROCESS USED BY A SALESPERSON OR NON-PRINCIPAL ASSOCIATE BROKER TO APPLY FOR AND RECEIVE A LICENSE ISSUED TO A DIFFERENT EMPLOYING BROKER.

(2) Terms defined in ~~article 1 and section~~ sections 103, 105, and 2501 of the code have the same meanings when used in these rules.

### **R 339.22103 ~~Conduct of public meetings; chairperson defined.~~ BOARD MEETINGS.**

Rule 103. BOARD MEETINGS ARE HELD IN ACCORDANCE WITH 1976 P.A. 267, MCL 15.261, ET SEQ., AND ARE OPEN TO THE PUBLIC.

~~(1) For the purpose of this rule, A chairperson means the person who is authorized to convene and moderate a meeting of the board or any committee of the board or any other person acting temporarily as convener or moderator.~~

~~(2) Each person present shall be provided a reasonable opportunity to address a public meeting on an agenda item or a topic relevant to the public body which is not on the agenda if the person makes a request to the board=s offices or to the department before convening the meeting or to the chairperson before the conclusion of the meeting.~~

~~(3) A group of 5 or more persons may be asked to give advance notice to the chairperson or the department of its intention to attend a meeting so that an effort may be made to provide adequate space. Such advance notice is not required.~~

~~(4) The chairperson shall do all of the following:~~

~~(a) Conduct the public participation portion of the meeting in an orderly and decorous fashion.~~

~~(b) Recognize each person wishing to speak, within the time limits available.~~

~~(c) Allow for public comment on each agenda item, and allocate a specific time on the agenda for general public comments.~~

~~(d) Exclude a person from the meeting only for a breach of the peace actually committed at the meeting.~~

~~(5) The chairperson may do any of the following:~~

~~(a) Limit the number of persons admitted to the meeting room if necessary to comply with public safety laws and regulations.~~

~~(b) Temporarily recess and promptly reconvene the meeting in a larger meeting room if more space is necessary.~~

~~(c) Impose reasonable limitations on time allotted for public comments.~~

~~(d) Inquire as to the interest or interests, if any, represented by a person addressing the meeting.~~

~~(e) To preserve the rights of all parties, prohibit a member of the public from addressing the meeting on the subject of an administrative law case pending before the board until a disposition of the case has been voted upon by the board.~~

## **PART 2. LICENSING**

### **R 339.22201 Application; eligibility.**

Rule 201. (1) A license shall not be issued to an individual who is less than 18 years old.

(2) A BROKER LICENSE SHALL BE ISSUED TO A LEGAL ENTITY ONLY IF THE INDIVIDUAL WHO HOLDS THE BROKER LICENSE IS IDENTIFIED ON THE APPLICATION AS 1 OF THE FOLLOWING:

(a) A SOLE PROPRIETOR

(b) A GENERAL PARTNER IN THE LIMITED PARTNERSHIP.

(c) AN OFFICER FOR THE CORPORATION.

(d) A MEMBER OR MANAGER FOR THE ASSOCIATION.

(e) A HOLDER OF A RESPONSIBLE POSITION OF AUTHORITY IN ANY OTHER LEGAL ENTITY AUTHORIZED BY THE STATE OF MICHIGAN UNDER WHICH THE BUSINESS IS ORGANIZED.

~~(2) A brokers license shall not be issued to a limited partnership unless the general partner is an associate broker.~~

(3) Associate broker and salesperson licenses shall only be issued to individuals.

(4) Associate brokers shall have met the requirements for broker licensure.

(5) The department may require an applicant to submit a report from an independent source pertaining to his or her previous occupation, criminal record, or any other information material to the applicant's qualifications for licensure.

### **R 339.22203 Validity of broker education.**

Rule 203. (1) An applicant for a broker or associate broker license shall have completed qualifying prelicensure education requirements AS DEFINED IN SECTION 2504 (1) OF THE CODE not more than 36 months before the date of application, unless the applicant has held a license as a salesperson for that intervening period.



(2) THE DEPARTMENT SHALL APPROVE ALL COURSES ACCEPTED FOR CREDIT TOWARD THE 90 CLOCK HOURS OF REQUIRED BROKER PRELICENSURE EDUCATION. NOT MORE THAN 1 BROKER COURSE ON THE SAME SUBJECT WILL BE ACCEPTED FOR CREDIT.

(3) (2) In meeting the BROKER prelicensure education requirements, CREDIT SHALL BE GIVEN FOR EITHER OF THE FOLLOWING:

Possession of a law degree, obtained at any time before the date of application, shall be equated to 60 clock hours of real estate education and 6 hours of instruction in civil rights law and FAIR housing LAW. ~~As required in section 2504 (1) of the code.~~

(B) POSSESSION OF A MASTER'S DEGREE IN BUSINESS ADMINISTRATION SHALL BE EQUATED TO 60 HOURS OF REAL ESTATE EDUCATION.

**R 339.22205 ACCEPTABLE-~~Relevant~~, related experience for broker applicants.**

Rule 205. (1) For purposes of calculating the time during which an applicant for a license as a broker or associate broker has been engaged in the real estate business as required by section 2505 (5) of the code, the following credit shall be granted by the department:

(a) Real estate salesperson or broker: One year of credit for each 12-month period of licensure in which 6 or more real estate transactions, as defined in section 2501(b) of the code, are verified.

(b) Builder: One year of credit for each 12-month period in which 6 residential units, or 6 commercial units, or 6 industrial units, or a combination thereof, were built and personally sold or leased by the applicant.

(c) Investor: Six months of credit for each ~~5~~ 6 real property transactions personally negotiated for a purchase or sale by the applicant for his or her own account with a maximum of 1 year of credit allowed. However, credit shall not be granted if the applicant has more than ~~5~~ 6 sales in any 12-month period in violation of the provisions of R 339.22319.

(d) Land or condominium developers: One year of credit for each 2 developments or subdivisions containing not ~~less~~ FEWER than 10 units or parcels which the applicant has bought, subdivided, and improved for sale as lots or dwellings.

(e) Attorneys: One year of experience for each year in which 6 real estate transactions were conducted as an attorney.

(f) Related occupations: One year of credit for each period equivalent to 40 hours per week, 48 weeks per year, in which the applicant has worked in a capacity directly related to the acquisition, financing, or ~~conveyancing~~ CONVEYANCE of real estate, OR positions in which the applicant ~~is deemed to have~~ HAS been directly involved in real estate business include serving as the decision-making authority in any of the following positions:

A loan or trust officer of a FEDERAL OR STATE-REGULATED DEPOSITORY INSTITUTION ~~bank, savings, and loan institution, or credit union.~~

(ii) A loan or trust officer of a mortgage company.

(iii) A real estate officer of a corporation, which is not a licensed real estate broker.

(iv) A title insurance company officer engaged in the closing of escrow accounts and real estate closings.

(v) A staff or real property appraiser.

(2) Where state law requires a person to be licensed ~~in order~~ to perform an activity, credit shall not be granted for experience obtained without proper licensure.

**R 339.22207 Examinations.**

Rule 207. (1) A written examination is required of all applicants, except as noted in this subrule. Exceptions to the written examination requirements may be granted to ANY OF the following:

- (a) An applicant ~~with~~ WHO HAS a documented ~~physical handicap~~ DISABILITY which would prevent the applicant from taking a written examination, ~~in which case an alternate form of examination shall be taken~~ FOR WHICH REASONABLE ACCOMMODATIONS MAY BE GRANTED UNDER THE AMERICANS WITH DISABILITIES ACT, P.L.101-336, 42 U.S.C. §§ 12101 ET SEQ.
- (b) An applicant for a ~~salesperson's~~ license who, within the last 3 years, has held a license as a salesperson, broker, or associate broker.
- ~~(c) An applicant for a broker's or associate broker's license, who, within the last 3 years, has held a license as a broker or associate broker.~~
- (C) ~~(d)~~ An applicant for a ~~broker's or associate broker's~~ BROKER OR ASSOCIATE BROKER license who, after surrendering a ~~brokers or associate brokers~~ BROKER OR ASSOCIATE BROKER license, has been ~~continually~~ CONTINUOUSLY licensed as a salesperson since the surrender.
- (2) A passing score on an examination, or on a portion of an examination if the examination is given in separate parts, shall be valid for 1 year from the date of examination.

### **R 339.22209 Conversion and transfer of license.**

Rule 209. (1) A ~~brokers or associate brokers~~ BROKER OR ASSOCIATE BROKER license shall not be converted into a ~~salespersons~~ SALESPERSON license, and a ~~salespersons~~ SALESPERSON license shall not be converted into a ~~brokers or associate brokers~~ BROKER OR ASSOCIATE BROKER license.

(2) A salesperson shall be licensed to a broker and shall not be licensed to more than 1 broker at the same time. A salesperson shall not be licensed as a broker or associate broker while he or she holds a ~~salespersons~~ SALESPERSON license.

(3) To be licensed to another broker as a salesperson, a broker or associate broker shall surrender ~~all~~ of his or her ~~brokers or associate brokers~~ BROKER OR ASSOCIATE BROKER licenses and apply for a ~~salespersons~~ SALESPERSON license. To return to being a broker or associate broker, the salesperson shall surrender his or her ~~salespersons~~ SALESPERSON license and apply for the broker or associate broker license.

(4) An individual ~~brokers~~ BROKER license is not transferable to a corporation, partnership, association, common law trust, or a combination of such entities, and the ~~brokers~~ BROKER license of a corporation, partnership, association, common law trust, or a combination of such entities is not transferable to an individual. A ~~brokers~~ BROKER license is not transferable. The license of ~~an~~ A PRINCIPAL associate broker ~~who is a principal of the broker~~ is not transferable. The license of a non-principal associate broker or a salesperson is transferable in accordance with ~~the provisions of~~ section 2508 (4) of the code, AND R 339.22101 and R 339.22211.

### **R 339.22211 Transfer of salespersons or non-principal associate brokers license; transfer OF for applicant; accounting for pocket card AND WALL LICENSE.**

Rule 211. (1) An applicant for a ~~license as a~~ salesperson or ~~as a~~ non-principal associate broker LICENSE who desires to transfer to a ~~new~~ DIFFERENT EMPLOYING broker before the issuance of the original license shall file a ~~completed~~ new application for licensure. ~~-, together with the proper fee.~~

(2) A salesperson or non-principal associate broker ~~may satisfactorily account for his or her pocket card by submitting~~ SHALL SUBMIT a signed statement to the department that he or she has obtained the dated signature and license number of his or her new broker on the reverse side of the pocket card. ~~and has had the card dated and signed by the former broker.~~

(3) Upon receipt of the completed application for transfer to a new broker, the proper fees, and the old license, the department shall consider the pocket card proper evidence of licensing for 45 days from the latest date written on the back of the card. If the applicant ~~for transfer~~ is notified that ~~the department does not approve the~~

~~application in its current form or denies the transfer, the applicant for transfer shall wait until his or her transfer is approved and he or she receives a new license and pocket card before engaging in real estate activities. THE APPLICATION IS INCOMPLETE, OR THE BROKER TO WHOM HE OR SHE IS TRANSFERRING IS NOT LICENSED, THE POCKET CARD SHALL NO LONGER BE VALID AND THE APPLICANT SHALL WAIT UNTIL THE NEW BROKER RECEIVES THE WALL LICENSE AND POCKET CARD BEFORE ENGAGING IN REGULATED ACTIVITIES.~~

(4) THE ABILITY TO CONDUCT REGULATED ACTIVITIES USING THE SIGNED AND DATED POCKET CARD MAY CONTINUE ONLY IF A SALESPERSON TRANSFER OR NEW ASSOCIATE BROKER APPLICATION IS RECEIVED WITHIN 45 DAYS FROM THE DATE ON THE POCKET CARD. ~~If the former broker, or associate broker, is not available or refuses to sign the transfer form and pocket card within a reasonable time, the applicant for transfer may request that the department waive the requirement for the former broker's signature. by certifying, in writing, that he or she has notified the former broker that he or she is transferring the license to the new broker.~~

### **R 339.22213 License renewal; late renewal.**

Rule 213. (1) An applicant for renewal of a license may continue to operate as previously licensed, using the expired wall license and pocket card as evidence of proper licensing, IF THE APPLICANT HAS MET BOTH OF THE FOLLOWING CONDITIONS BY THE EXPIRATION DATE:

~~only if the completed application for renewal~~ SUBMITTED A COMPLETE APPLICATION FOR RENEWAL AND THE REQUIRED FEE.

~~indicating that all renewal requirements, including the completion of continuing education, have been met,~~ COMPLETED THE REQUIRED CONTINUING EDUCATION. ~~is received by the department before the license is due to expire.~~

(2) An applicant for renewal whose application is received by the department after the expiration date shall not operate until ~~he or she~~ THE APPLICANT'S EMPLOYING BROKER receives his or her new license and pocket card.

(3) ~~(2)~~ A person who ~~failed~~ FAILS to renew a license within 60 days of expiration SHALL APPLY FOR RELICENSURE IN ACCORDANCE WITH ~~but who applies for a license within 3 years of the date of expiration of that license, shall submit a new application for licensure and meet the qualifications for licensure set forth in sectionS 2504(5) AND 411(4) of the code. , including the completion of the continuing education course currently being offered to prepare licensees for renewal.~~

(4)~~(3)~~ Completion of continuing education ~~to become relicensed~~ FOR RELICENSURE shall not qualify as completion of the continuing education requirement for the next license renewal.

### **R 339.22215 Application for new license after revocation of previous license.**

Rule 215. A person whose license has been revoked shall not apply for a new license for ~~a minimum of~~ AT LEAST 3 years after the service of the final order. To be considered for a license following a revocation, an applicant shall meet all educational and examination requirements in effect at the time of application. Credit for education, examinations, or experience obtained before the revocation shall not be granted.

## **PART 3. PRACTICE AND CONDUCT**

### **R 339.22301 Assumed names.**

Rule 301. (1) A broker shall not conduct business or advertise under a name other than that in which the license is issued.

(2) AN INDIVIDUAL broker OR A PARTNERSHIP desiring to operate under an assumed name shall send to the department, with the application for A BROKERs license, a copy of the certificate of assumed name which is certified by the clerk of the county where the certificate is on file. ~~In the case of a A BROKER APPLICANT~~

WHO IS A LEGAL ENTITY SHALL SUBMIT A CERTIFICATE OF ASSUMED NAME WITH THE APPLICATION. ~~corporate applicant, the application shall be accompanied by articles of incorporation or a certificate of incorporation~~ certified by the proper state authority.

**R 339.22305 Listing SERVICE PROVISION AGREEMENT.**

Rule 305. (1) A BROKER OR A licensee ACTING ON BEHALF OF THE EMPLOYING BROKER who ~~obtains a listing~~ ENTERS INTO A SERVICE PROVISION AGREEMENT WITH A PARTY OR PARTIES shall PROVIDE, at the time of signing, ~~by the listing owner give~~, a true, executed copy of the ~~listing~~ AGREEMENT to the party or parties signing the AGREEMENT. ~~listing~~. Every ~~listing~~ agreement shall be fully completed by the licensee before ~~it is signed by the listing owner~~. THE PARTY OR PARTIES SIGN IT.

(2) A ~~listing~~ SERVICE PROVISION agreement shall set forth INCLUDE a definite expiration date and shall not contain a provision requiring the party signing the ~~listing~~ AGREEMENT to notify the broker of the party's intention to cancel the ~~listing~~ AGREEMENT upon or after the expiration date.

**R 339.22307 Delivery of offer to purchase to ~~offeror~~ BUYER; tender of written offers to seller; delivery of copies of acceptance to ~~purchaser~~ BUYER and seller; inclusion of terms and conditions in offer to purchase.**

Rule 307. (1) A licensee shall deliver to the BUYER ~~an offeror~~ a signed copy of the offer to purchase immediately after it has been signed by THE BUYER ~~the offeror~~.

(2) A licensee shall promptly ~~tender~~ DELIVER all written offers to purchase to the seller upon receipt. ACCEPTABLE METHODS OF DELIVERY INCLUDE BUT ARE NOT LIMITED TO EITHER OF THE FOLLOWING:

(I) DELIVERY IN PERSON OR BY MAIL

(II) DELIVERY BY ELECTRONIC COMMUNICATION AS DEFINED IN 2000 PA 305, MCL 450.831 ET SEQ. THE USE OF ELECTRONIC RECORDS OR DIGITAL SIGNATURES FOR ANY REAL ESTATE TRANSACTION REQUIRES THE PRIOR AGREEMENT OF THE PARTIES.

(3)(2) Upon obtaining a proper acceptance of the offer to purchase, signed by the seller, the licensee shall promptly deliver true executed copies of the acceptance to the purchaser and seller.

(4) A licensee shall make certain that all terms and conditions of the real estate transaction are included in the offer to purchase.

(5) A licensee shall not be subject to disciplinary action for failing to submit to the seller any additional offers to purchase which are received after the seller has accepted an offer and the sales agreement is fully executed, unless a ~~listing~~ SERVICE PROVISION agreement requires that subsequent offers be presented.

**R 339.22309 Licensee's recommendation to purchaser. ~~that abstract of title or title policy be furnished by seller and that purchaser retain attorney.~~**

Rule 309. (1) A licensee who is involved at the time of execution of an offer to purchase in a real estate transaction shall recommend to the purchaser that a ~~complete abstract of title or~~ fee title policy in the amount of the purchase price be furnished to the purchaser by the seller, issued or certified to the approximate date of the closing of the real estate transaction.

~~(2) When a purchaser is notified that the offer to purchase has been accepted by the seller, a licensee shall recommend to the purchaser that an attorney be retained to pass upon the marketability of the title to the property involved and to ascertain whether or not the details in the sale of the real estate or business opportunity have been strictly adhered to.~~

(2) AN OFFER TO PURCHASE SHALL INCLUDE ALL TERMS AND CONDITIONS UNDER WHICH EARNEST MONEY DEPOSITS SHALL BE DISBURSED IF AN EXECUTED PURCHASE AGREEMENT TERMINATES.

**R 339.22310 SUPERVISION OF A SALESPERSON OR A NON-PRINCIPAL ASSOCIATE BROKER BY A BROKER OR PRINCIPAL ASSOCIATE BROKER.**

Rule 310. (1) A BROKER OR A PRINCIPAL ASSOCIATE BROKER SHALL SUPERVISE THE WORK OF A NONPRINCIPAL ASSOCIATE BROKER OR SALESPERSON. SUPERVISION, AT A MINIMUM, SHALL INCLUDE ALL OF THE FOLLOWING:

(A) MAINTAINING DIRECT COMMUNICATION IN PERSON OR BY RADIO, TELEPHONE, OR ELECTRONIC COMMUNICATION ON A CONTINUOUS BASIS.

(B) REVIEWING THE PRACTICE OF THE SUPERVISED LICENSEE.

(C) REVIEWING REPORTS.

(D) PROVIDING ANALYSES AND GUIDANCE OF THE LICENSEE'S PERFORMANCE IN REGULATED ACTIVITIES.

(E) PROVIDING PREDETERMINED WRITTEN OPERATING POLICIES AND PROCEDURES.

**R 339.22311 Closing transactions.**

Rule 311. (1) IN A NON-COOPERATIVE TRANSACTION, the BROKER or PRINCIPAL associate broker who is involved at the closing of a real estate or business opportunity transaction, shall furnish, or cause to be furnished, to the buyer and seller, a complete and detailed closing statement signed by the broker or PRINCIPAL associate broker showing each party all receipts and disbursements affecting that party. If the closing is conducted at a ~~bank~~ REGULATED DEPOSITORY INSTITUTION, A TITLE COMPANY, or other closing entity, the broker or PRINCIPAL associate broker is still responsible for the content of the closing statement and shall sign the final closing document.

(2) A salesperson shall not close a real estate or business opportunity transaction unless under the supervision of a THE broker to whom the salesperson is licensed. The broker or PRINCIPAL associate broker shall assume full responsibility for execution of the closing statements prepared by the salesperson or other persons acting under the broker's or PRINCIPAL associate broker's direct supervision.

(3) Without written approval of the seller and BUYER ~~purchaser~~, a licensee shall not close a transaction contrary to terms or conditions of an executed agreement.

(4) In a cooperative transaction, either the broker or the PRINCIPAL associate broker may close the sale and furnish closing statements; however, it is the final responsibility of the listing broker or PRINCIPAL associate broker to close the sale and furnish signed closing statements to BOTH the buyer and the seller.

**R 339.22313 Trust accounts.**

Rule 313. (1) Trust or escrow accounts shall be maintained in demand accounts only. Checks drawn on the trust or escrow accounts shall be signed by a broker or a PRINCIPAL associate broker. Cosignatories may be used; however, the signature of a broker or PRINCIPAL associate broker shall accompany this signature.

(2) A broker shall maintain a non-interest-bearing demand trust account when any earnest money deposits or money belonging to others comes into his or her possession. The account shall be maintained in accordance with the requirements of section 2512 (l) ~~(g)~~ (J) of the code.

(3) A broker may maintain more than 1 trust account. A broker may maintain the broker's own funds in an account ~~not to exceed~~ THAT IS NOT MORE THAN \$500.00 in each trust account to cover bank service charges and bank minimum balance requirements or to avoid the account being closed when there are no other funds in the account. Such funds shall be accounted for in a bookkeeping system as described in subrule (4) of this rule.

(4) A broker shall maintain a bookkeeping system in the office. At a minimum, the system shall consist of BOTH OF the following:

A permanent record book or record, called a journal, which shows THE chronological sequence in which funds are received and disbursed, AS FOLLOWS:.

(i) For funds received, the journal shall include ALL OF THE FOLLOWING INFORMATION:

(A) The date of receipt and date of deposit.

(B) The name of the party who is giving the money

(C) The name of the principal.

(D) ~~and~~ The amount OF THE FUNDS.

(ii) For FUNDS DISBURSED, ~~disbursements~~, the journal shall include ALL OF THE FOLLOWING INFORMATION:

(A) The date OF THE DISBURSEMENT.

(B) The payee.

(C) The check number.

(D) THE purpose of the disbursement.

(E) ~~and~~ The amount OF THE DISBURSEMENT.

(iii) A running balance shall be shown after each entry, both for receipt and disbursement. If separate journals are maintained for 1 ~~one~~ trust account, then a combined balance shall be maintained.

A ledger, a record book, or record which shows receipts and disbursements as they affect a single, particular transaction between a buyer and seller. ~~or a landlord and tenant~~. The ledger shall segregate 1 ~~one~~ transaction from another transaction, AS FOLLOWS:

(i) FOR FUNDS RECEIVED, the ledger shall include ALL OF THE FOLLOWING INFORMATION:

(A) The names of both parties to a transaction.

(B) THE property address or brief legal description.

(C) ~~and~~ The dates and amounts received.

~~When disbursing funds,~~

(ii) FOR FUNDS DISBURSED, THE LEDGER SHALL INCLUDE ALL OF THE FOLLOWING INFORMATION:

(A) The date.

(B) THE payee.

(C) THE check number.

(D) THE ~~and~~ amount OF THE DISBURSEMENT. ~~shall be shown~~.

(5) ~~(C)~~ All trust or escrow account records shall be maintained for a period of not less than 5 years from the date of inception of such records.

(6) ~~(S)~~ Disbursement of an earnest money deposit shall be made AT CONSUMMATION OR TERMINATION OF THE AGREEMENT in accordance with the agreement signed by the parties. ~~In the absence of a pending civil action or an agreement controlling the disbursement of an earnest money deposit,~~

~~disbursement of an earnest money deposit to a seller shall not be grounds for disciplinary action if the payment of such earnest money has been made following the passage of 1 year=s time from the date of an accepted offer to purchase and is based upon a good faith decision that the buyer no longer has a claim to such earnest money deposit. The lack of grounds for disciplinary action does not relieve the broker from civil liability.~~

HOWEVER, ANY DEPOSIT FOR WHICH BUYER OR SELLER HAS MADE CLAIM, SHALL REMAIN IN THE BROKER'S TRUST ACCOUNT UNTIL A CIVIL ACTION HAS DETERMINED TO WHOM THE DEPOSIT MUST BE PAID. THE BROKER MAY ALSO GIVE THE DEPOSIT TO THE PROPER COURT FOR INTERPLEADING. IF THE DEPOSIT IS IN DISPUTE, BUT THERE IS NO PENDING CIVIL ACTION, THEN AFTER 1 YEAR FROM THE DATE OF AN ACCEPTED OFFER TO PURCHASE, THE BROKER MAY RELEASE THE FUNDS TO EITHER BUYER OR SELLER. THIS ACTION SHALL NOT BE GROUNDS FOR DISCIPLINARY ACTION, BUT DOES NOT RELIEVE THE BROKER FROM CIVIL LIABILITY.

**R 339.22315 Licensee buying or acquiring interest in property; intent.**

Rule 315. (1) When buying or acquiring, directly or indirectly, an interest in a property, a licensee shall disclose the fact of his or her licensure as a real estate broker, associate broker, or salesperson clearly, in writing, to the owner before the owner is asked to sign the purchase agreement. ~~Satisfactory written proof of this disclosure shall be produced by the licensee upon request by the department.~~

(2) When a licensee acquires, directly or indirectly, an option to purchase a particular property from an owner who requested the licensee's services as a real estate licensee, the licensee shall disclose the fact of his or her licensure as a real estate broker, associate broker, or salesperson, in writing, to the owner before the owner is asked to sign the option agreement. ~~Satisfactory written proof of this disclosure shall be produced by the licensee upon request of the department.~~

(3) A licensee shall not become a party to a net ~~listing~~ SERVICE PROVISION agreement for an owner or seller OR BUYER as a means of securing a real estate commission.

(4) A LICENSEE SHALL PROVIDE, UPON REQUEST OF THE DEPARTMENT, WRITTEN PROOF OF ANY REQUIRED DISCLOSURES.

**R 339.22317 Licensee buying or acquiring interest in property; commission; consent by seller.**

Rule 317. A licensee who buys or acquires an interest in property, directly or indirectly, AND WHO IS DUE A COMMISSION, FEE, OR OTHER VALUABLE CONSIDERATION AS A RESULT OF THE SALE SHALL COMPLY WITH ALL OF THE FOLLOWING PROVISIONS BEFORE COMPENSATION IS RECEIVED:

(A) DISCLOSE, IN WRITING, TO THE SELLER OR OWNER THAT THE LICENSEE WILL BE COMPENSATED FOR THE SALE.

(B) OBTAIN THE WRITTEN PERMISSION FROM THE SELLER OR OWNER TO RECEIVE THE SPECIFIED CONSIDERATION. ~~shall not charge or accept from the seller, directly or indirectly, a commission, fee, or other valuable consideration as a result of the sale of the property in the transaction without the prior written consent to the specified consideration by the seller.~~

(C) PROVIDE WRITTEN PROOF OF COMPLIANCE UPON REQUEST BY THE DEPARTMENT.

**R 339.22321 Licensee commissions FOR OTHER SERVICES; disclosure AND CONSENT OF BUYER AND SELLER REQUIRED. to, and consent of, purchaser and seller.**

Rule 321. (1) A licensee shall not accept, directly or indirectly, a ~~placement~~ REFERRAL fee, commission, or other valuable consideration for placing a loan with a mortgage lender or representative unless the licensee fully

informs the purchaser and seller of that fact and obtains the prior written consent of the purchaser and seller to IN the transaction.

(2) A LICENSEE WHO IS COMPENSATED AS AN EMPLOYEE OR INDEPENDENT CONTRACTOR BY A FINANCIAL INSTITUTION, TITLE COMPANY, OR ANY OTHER REAL ESTATE SERVICE PROVIDER MAY ACCEPT A COMMISSION, FEE, OR OTHER VALUABLE CONSIDERATION FROM HIS OR HER EMPLOYER ONLY UNDER THE FOLLOWING CONDITIONS:

(A) THE LICENSEE SHALL DISCLOSE, IN WRITING, TO THE SELLER, OWNER, OR BUYER THAT THE LICENSEE WILL BE COMPENSATED FOR THE SERVICE.

(B) THE LICENSEE SHALL OBTAIN THE WRITTEN PERMISSION FROM THE SELLER, OWNER, OR BUYER TO RECEIVE THE SPECIFIED CONSIDERATION.

(C) THE LICENSEE SHALL PROVIDE WRITTEN PROOF OF COMPLIANCE WITH THIS RULE UPON REQUEST BY THE DEPARTMENT.

~~(2) A licensee shall not accept a commission, fee, or other valuable consideration from an abstract, mortgage, home warranty, title insurance, or insurance company or representative in any real estate transaction in which the licensee, directly or indirectly, receives, or is entitled to receive, a real estate commission as a result of the sale of property in such transaction unless such fee, commission, or consideration is accepted with the prior knowledge and written consent of the party or parties to the transaction with which the licensee has a real estate agency relationship.~~

**R 339.22323 Broker's place of business; location; branch office license; supervision and management of branch office.**

Rule 323. (1) A broker shall maintain a place of business in this state which is an actual and established physical location from which the broker can and does conduct the broker's business and where the broker's books and records are maintained.

(2) A license for a branch office is required for any location in addition to the principal business location which, by advertising or signs or otherwise, is held out to the public as a place where clients or customers may do business or consult with a licensee.

(3) An individual broker, ~~an~~ A PRINCIPAL associate broker, ~~for a corporation, partnership, association, common law trust, or a combination of such entities;~~ or the associate broker who manages a branch office shall be reasonably available to supervise and to manage the business during regular business hours, IN ACCORDANCE WITH SECTION 2505 (3) OF THE CODE.

**R 339.22325 Contract with licensee abrogating broker's authority to supervise licensee prohibited.**

Rule 325. A broker shall not contract with an individual SALESPERSON OR NON-PRINCIPAL ASSOCIATE BROKER who is licensed to the broker so as to lose the authority to supervise the licensee.

**R 339.22329 Advertising generally; advertising of property owned by brokers; advertising by salespersons; advertising of property owned by salespersons.**

Rule 329. (1) Except as provided in subrule (2) of this rule, all advertisements to buy, sell, exchange, rent, lease, or mortgage real estate or business opportunities by a broker, THROUGH PRINT, AUDIO, TELEVISION OR ELECTRONIC COMMUNICATION, shall include ALL OF THE FOLLOWING INFORMATION:

(A) The broker's name as licensed.

(B) ~~And~~ the broker's telephone number.



(C) THE BROKER'S street address, INCLUDING CITY AND STATE.

IF ADVERTISING IS DISTRIBUTED OUTSIDE THE STATE OF MICHIGAN, THE NAME OF THE STATES IN WHICH THE BROKER IS LICENSED.

(2) All advertising shall indicate affirmatively that the party advertising is a LICENSED real estate broker.

(3) ~~(2)~~ An individual licensed as a broker or associate broker may advertise personally owned property for sale or for lease in his or her own name, and need not use the name of the broker as licensed. However, the advertising shall indicate affirmatively that the party advertising is a licensed broker or associate broker.

~~(4)(3)~~ Except as provided in subrule ~~(4)~~ (5) of this rule, advertising by a salesperson or an associate broker shall be under the supervision of, and in the

licensed name of, the individual's EMPLOYING broker AS PROVIDED IN SUBRULE (1) OF THIS RULE.

(5) ~~(4)~~ A salesperson may only advertise to sell property under his or her own name if the property is the principal residence of the salesperson. A salesperson may only advertise property for rent or lease under his or her own name if the salesperson is the owner of the property.

(6) A BROKER SHALL ADVERTISE PROPERTIES ONLY IF BOTH OF THE FOLLOWING CONDITIONS EXIST:

(A) A SERVICE PROVISION AGREEMENT IS IN EFFECT OR THE BROKER HAS RECEIVED WRITTEN PERMISSION FROM THE OWNER OR SELLER OF THE PROPERTY TO ALLOW OTHER LICENSED BROKERS TO ADVERTISE THE LISTED PROPERTY.

(B) THE INFORMATION IS UP TO DATE AND ACCURATE.

(7) THE LICENSEE SHALL PROVIDE WRITTEN PROOF OF COMPLIANCE WITH THIS RULE UPON REQUEST BY THE DEPARTMENT.

### **R 339.22333 Misrepresentation of material facts prohibited; disclosure of material facts.**

Rule 333. (1) A licensee shall not, directly or indirectly, misrepresent material facts.

(2) A licensee's full disclosure to a buyer OR SELLER of material facts within his or her knowledge about the condition of the real estate offered shall not be grounds for disciplinary action, despite a claim by the BUYER OR seller that such THE disclosure constituted disloyalty to the BUYER OR seller in violation of an agency relationship.

### **R 339.22337 Failure of listing broker to cooperate with other brokers.**

Rule 337. Failure of the listing broker to cooperate with other brokers is not, in itself, a violation of law or these rules, unless the broker has indicated or implied to the BUYER OR seller that the broker would cooperate with other brokers.

### **R 339.22339 Payments by brokers following termination of licensed relationship.**

Rule 339. If an individual earned commissions or other income while licensed to a broker, it shall not be grounds for disciplinary action as a violation of section 2512 ~~(4)~~ OF THE CODE for the broker to pay such earned commissions or income to that individual, regardless of whether that individual is now licensed to another broker or is no longer licensed under the code.

## **PART 4. ENFORCEMENT**

### **R 339.22401 Production by licensee of documents or records.**

Rule 401. A licensee shall ~~produce~~ PROVIDE for inspection BY AN AUTHORIZED REPRESENTATIVE OF THE DEPARTMENT ~~, at the broker's place of business, during normal business hours, for an authorized~~

~~representative of the department~~, any document or record as may be reasonably necessary for investigation or audit in the enforcement of the code and these rules.

## **PART 5. OUT-OF-STATE LAND SALES**

### **R 339.22513 Property report; review by prospective purchaser; proof of furnishing report.**

Rule 513. (1) A broker shall furnish a property report, as required by R 339.22511, to prospective purchasers ~~and afford a reasonable time for its review~~ before a prospective purchaser signs a document by which the purchaser becomes, or expresses an intention to become, obligated to purchase the property offered.

(2) IF THE PROPERTY REPORT HAS NOT BEEN PROVIDED TO A PROSPECTIVE PURCHASER BEFORE THE PURCHASER BECOMES OBLIGATED OR EXPRESSES AN INTENTION TO BECOME OBLIGATED TO PURCHASE THE PROPERTY, THEN THE PURCHASER MAY RESCIND THE PURCHASE AGREEMENT OR INTENT TO PURCHASE WITHIN 5 BUSINESS DAYS OF SIGNING THE DOCUMENT.

(3) A broker shall produce satisfactory proof of having properly furnished a property report TO A PROSPECTIVE PURCHASER upon demand by the department.

### **R 339.22515 Filing requirements.**

Rule 515. (1) For purposes of approval under section 2511 of the code, A MICHIGAN~~the~~ broker shall submit DOCUMENTATION FOR PROPERTY WHICH INCLUDES, BUT IS NOT LIMITED TO ANY OF THE FOLLOWING:

(A) VACANT LAND WHICH CONTAINS NOT FEWER THAN 25 LOTS, PARCELS, UNITS, OR INTERESTS THAT ARE DIVIDED OR SOLD UNDER A COMMON PROMOTIONAL PLAN, ANY PHASE DEVELOPMENT WHICH ACCUMULATES A TOTAL OF 25 OR MORE LOTS, PARCELS, UNITS, OR INTERESTS THAT ARE DIVIDED OR SOLD UNDER A COMMON PROMOTIONAL PLAN, OR ANY PHASE DEVELOPMENT WHICH ACCUMULATES A TOTAL OF 25 OR MORE LOTS, PARCELS, UNITS, OR INTERESTS. THERE SHALL BE A LEGAL OBLIGATION ON THE PART OF THE SELLER OR HIS OR HER ASSIGNEE OR AGENT TO CONSTRUCT A BUILDING WITHIN 2 YEARS FROM THE DATE OF SALE, LEASE, OPTION, ASSIGNMENT, OR AWARD BY LOTTERY OR AS A PRIZE. A BUILDING IS DEFINED AS ANY OF THE FOLLOWING:

(I) A COMMERCIAL OR INDUSTRIAL BUILDING.

(II) A SHOPPING CENTER.

(III) A DWELLING UNIT OR APARTMENT.

(B) TIMESHARE OR MEMBERSHIP INTERESTS.

(C) CONDOMINIUM UNITS.

(D) ANY REAL PROPERTY INTEREST THAT IS EXEMPT FROM 1972 P.A. 286, MCL 565.801 ET SEQ. ~~a copy of an order of registration, pursuant to Act No. 286 of the Public Acts of 1972, as amended, being " 565.804 or 565.805 of the Michigan Compiled Laws, of the property to be sold, unless the property is exempt from such registration by section 4 or 5 of that act.~~

(2) ~~For those types of property or sales exempted from registration by section 4 or 5 of Act No. 286 of the Public Acts of 1972, as amended, being " 565.804 or 565.805 of the Michigan Compiled Laws,~~ VACANT LAND, the broker shall submit a copy of the filing currently effective with the office of interstate land sales registration pursuant to Public Law 90-448, 15 U.S.C. §§ 1701 to 1720. The submission shall include the order of registration, ~~and~~ the property report, AND THE APPROVAL DOCUMENT FROM THE SITUS STATE.

(3) ~~Where the broker will engage in sales~~ WHEN A BROKER ENGAGES IN SALES or the promotion of sales of condominiums exempted by section 4 or 5 of 1972 P.A. 286 Act No. 286 of the Public Acts of 1972, as amended, being MCL 565.804 OR 565.805 ~~565.801 et seq. of the Michigan Compiled Laws,~~ the department may accept a submission of the filing and order from the situs state under an act regulating condominiums as evidence that the broker has satisfied the requirements of R 339.22507.

(4) WHEN THE BROKER WILL ENGAGE IN THE SALE OF TIMESHARE OR MEMBERSHIP INTERESTS, AND ALL SALES WILL BE CONDUCTED IN THE SITUS STATE, THE DEPARTMENT MAY ACCEPT A SUBMISSION OF THE FILING AND ORDER FROM THE SITUS STATE SHOWING APPROVAL HAS BEEN GRANTED. THE SUBMISSION MAY BE EVIDENCE THAT THE BROKER HAS SATISFIED THE REQUIREMENT OF R 339.22507.

FOR OUT-OF-STATE PROPERTY WHICH SHALL BE OFFERED THROUGH A MICHIGAN BROKER IN THE STATE OF MICHIGAN, THE APPLICATION FOR APPROVAL SHALL CONTAIN ALL INFORMATION AS SPECIFIED IN R 339.22501 THROUGH R 339.22513.

FOR PURPOSES OF APPROVAL UNDER SECTION 2511 OF THE CODE, AN APPLICATION AND FEE FOR APPROVAL FROM A MICHIGAN LICENSED BROKER SHALL ACCOMPANY ALL OUT-OF-STATE PROPERTY REGISTRATIONS, INCLUDING THOSE SUBMISSIONS THAT HAVE BEEN APPROVED UNDER 1972 P.A. 286, MCL 565.801 ET SEQ.

**R 339.22519 Investigation expenses other than on-site inspection expenses; ~~limitation~~ deposit of estimated expenses for on-site inspection.**

Rule 519. ~~Expenses incurred by the department, except for on-site inspection expenses, in investigating a broker's application for approval shall be deemed to be covered by the payment to the department of \$500.00.~~ A BROKER SHALL PAY THE DEPARTMENT A FEE OF \$500.00 TO COVER INVESTIGATION EXPENSES WHEN SUBMITTING THE APPLICATION FOR DEPARTMENT APPROVAL. THE FEE DOES NOT INCLUDE THE COST OF AN ON-SITE INSPECTION.

**R 339.22523 Approval to engage in sales of promotional nature; form; duration.**

Rule 523. (1) The approval of brokers to engage in sales of a promotional nature pursuant to section 2511 of the code shall be in the form of an order and shall be effective for 1 year from the date of issuance.

(2) A BROKER SHALL ANNUALLY RENEW THE ORDER OF APPROVAL TO ENGAGE IN SALES OF A PROMOTIONAL NATURE, PURSUANT TO SECTION 2511 OF THE CODE, AND SHALL BEAR THE COSTS INCURRED BY THE DEPARTMENT IN INVESTIGATING THE APPLICATION.

**R 339.22525 Rescinded.**

**~~R 339.22525 Renewal of order of approval to engage in sales of promotional nature.~~**

Rule 525. ~~Annually, a broker shall renew the order of approval to engage in sales of a promotional nature pursuant to section 2511 of the code on forms provided by the department and shall bear the costs incurred by the department in investigating the application.~~

**R 339.22527 Broker holding order of approval to engage in sales of promotional nature; notice of changes.**

Rule 527. A broker who holds an order of approval to engage in sales of a promotional nature pursuant to section 2511 of the code shall notify the department immediately of any material change in the information required by R 339.22505 to ~~R 339.22514~~ R 339.22513.

**PART 6. REAL ESTATE EDUCATION  
SUBPART 1. GENERAL PROVISIONS**

**R 339.22601 Course approval; certificate.**

RULE 601. (1) A REAL ESTATE SCHOOL, SPONSOR, OR EDUCATIONAL INSTITUTION SHALL APPLY FOR AND OBTAIN APPROVAL FOR REAL ESTATE EDUCATION COURSES BEFORE THE COURSES ARE OFFERED FOR ENROLLMENT. ~~Real estate courses shall receive approval from the department before they are offered to the public for enrollment.~~

(2) THE DEPARTMENT SHALL ISSUE A CERTIFICATE OF COURSE APPROVAL OR A NOTICE OF DENIAL TO THE SCHOOL, SPONSOR, OR EDUCATIONAL INSTITUTION WITHIN 60 DAYS AFTER THE APPLICATION IS RECEIVED. ~~Within 60 days after receipt and favorable review of completed documents, the department shall issue a certificate of course approval to the applying real estate school, sponsor, or institution.~~

**R 339.22602 ADVERTISING FOR APPROVED REAL ESTATE COURSES.**

RULE 602. ALL ADVERTISING FOR APPROVED REAL ESTATE COURSES THAT ARE HELD OUT TO THE PUBLIC AS FULFILLING THE REQUIREMENTS OF SECTION 2504 OF THE CODE SHALL BE IN THE NAME OF THE APPROVED SCHOOL, SPONSOR, OR INSTITUTION.

**R 339.22604 CERTIFICATE OF COMPLETION; CONTENT.**

RULE 604. (1) A REAL ESTATE SCHOOL, SPONSOR, OR INSTITUTION SHALL ISSUE A CERTIFICATE OF COMPLETION TO A STUDENT WHO SUCCESSFULLY COMPLETES AN APPROVED REAL ESTATE COURSE. THE CERTIFICATE SHALL INCLUDE ALL OF THE FOLLOWING INFORMATION:

(A) THE DATE OF COURSE COMPLETION.

(B) THE NAME OF THE COURSE ATTENDED. IF THE COURSE IS APPROVED FOR CONTINUING EDUCATION, THE TOPIC APPROVAL NUMBERS, IF ASSIGNED.

(C) THE NAME AND APPROVAL NUMBER OF THE SCHOOL, SPONSOR, OR INSTITUTION.

(D) THE NAME OF THE STUDENT.

(E) THE NUMBER OF CLASSROOM HOURS COMPLETED BY THE STUDENT.

(F) THE SIGNATURE OF THE COURSE COORDINATOR.

(2) EACH STUDENT OR LICENSEE SHALL PROVIDE A STATE-ISSUED PHOTO IDENTIFICATION TO THE SCHOOL, SPONSOR, OR INSTITUTION BEFORE RECEIVING THE CERTIFICATE OF COMPLETION.

**R 339.22605 STUDENT RECORDS; CONTENT; INSPECTION.**

RULE 605. (1) EACH APPROVED REAL ESTATE SCHOOL OR INSTITUTION SHALL ESTABLISH AND PERMANENTLY MAINTAIN A RECORD FOR EACH STUDENT. EACH APPROVED REAL ESTATE EDUCATION SPONSOR SHALL ESTABLISH AND MAINTAIN A RECORD FOR EACH STUDENT FOR NOT LESS THAN 3 YEARS FROM THE INCEPTION OF EACH RECORD.

(2) STUDENT RECORDS SHALL CONTAIN ALL OF THE FOLLOWING INFORMATION:

(A) THE STUDENT'S NAME AND ADDRESS.

(B) THE NUMBER OF CLASSROOM HOURS ATTENDED.

(C) THE STUDENT'S GRADE, IF AN EXAMINATION IS REQUIRED TO DETERMINE SUCCESSFUL COMPLETION.

(D) THE DATE OF COURSE COMPLETION.

(E) THE DATE THE CERTIFICATE WAS ISSUED.

(3) ALL RECORDS SHALL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS BY AN AUTHORIZED REPRESENTATIVE OF THE DEPARTMENT, IF THE INSPECTION DOES NOT VIOLATE A LAW.

**R 339.22606 STUDENT CONTRACTS; RETURN OF FEES.**

RULE 606. (1) IF THE REAL ESTATE SCHOOL, SPONSOR, OR INSTITUTION USES A STUDENT CONTRACT, THE DOCUMENT SHALL BE PROVIDED TO THE DEPARTMENT WITH THE APPLICATION FOR APPROVAL.

(2) THE REAL ESTATE SCHOOL, SPONSOR, OR INSTITUTION SHALL STATE, ON THE APPLICATION FOR APPROVAL, THE POLICY REGARDING THE RETURN OF FEES IF A STUDENT FAILS TO APPEAR, IS DISMISSED, OR WITHDRAWS VOLUNTARILY FROM A REAL ESTATE PRELICENSURE OR CONTINUING EDUCATION COURSE.

**R 339.22609 Instructors.**

Rule 609. (1) EACH INSTRUCTOR SHALL OBTAIN APPROVAL FROM THE DEPARTMENT BEFORE TEACHING ANY REAL ESTATE COURSE. ~~To receive approval from the department, every course of study shall have an instructor who is acceptable to the department.~~

(2) Instructors shall be responsible for all of the following:

(a) Compliance with all laws and rules relating to real estate education.

(b) Providing students with current and accurate information.

(c) Maintaining an ENVIRONMENT ~~atmosphere~~ conducive to learning. ~~in the classroom.~~

(d) Assuring and certifying attendance of students enrolled in courses.

(e) Providing assistance to students and responding to questions relating to course materials.

(f) Attending such workshops or instructional programs as ~~are reasonably~~ required by the department.

(3) The real estate school, institution, or sponsor shall submit ~~on forms provided by~~ TO the department the qualifications of each instructor to be used in an approved course not less FEWER than 60 days before the instructor is scheduled to begin instruction.

**R 339.22613 Student ATTENDANCE AND makeup policy.**

Rule 613. (1) A STUDENT SHALL ATTEND A COURSE IN ITS ENTIRETY TO OBTAIN CREDIT FOR THE COURSE.

(2) A real estate school, sponsor, or institution shall have a makeup policy for students who are absent from, or late arriving at, regularly scheduled class sessions.

**SUBPART 2. PRELICENSURE COURSES**

**R 339.22631 Application for approval to offer pre-licensure courses; forms; required information.**

Rule 631. (1) A SCHOOL, SPONSOR, OR INSTITUTION SHALL SUBMIT AN APPLICATION TO THE DEPARTMENT FOR APPROVAL OF PRELICENSURE COURSES. ~~An application for approval of prelicensure real estate courses shall be on such forms as the department may prescribe. Such forms~~ THE APPLICATION shall ~~require~~ INCLUDE ALL OF THE FOLLOWING INFORMATION:

(a) The names and qualifications of instructors and the prelicensure courses they are teaching.

- (b) ~~An DETAILED CONTENT outline of the~~ FOR EACH prelicensure courses to be taught, which shall include the number of hours allocated to EACH TOPIC. ~~subject matter topics.~~
- (c) The standards a student must meet to successfully complete the course, including a statement as to the grading system, attendance, and class makeup policy for prelicensure courses.
- (d) A copy of the advertising materials used to promote the prelicensure courses.
- (e) The TENTATIVE schedule and geographic location of prelicensure course meetings or classes.
- (f) A copy of any contract for prelicensure courses that the school has with its students.
- (g) The methodology for verifying and monitoring attendance.
- (2) A change in the information required to be provided on the application forms shall be reported to the department within 30 days of the change. The department shall accept or reject a change within 60 days of notification of the change.
- (3) A real estate school or institution shall also demonstrate that it is an entity which may offer prelicensure courses in accordance with section 2504 (8) of the code.

**R 339.22633 Rescinded.**

~~R 339.22633 Student contract; return of fees.~~

~~Rule 633. The real estate school, or institution student contract shall state the school's or institution's policy regarding the return of fees if a student is dismissed or withdraws voluntarily from the course.~~

**R 339.22635 Rescinded.**

~~R 339.22635 Student records; content; inspection.~~

~~Rule 635. (1) Each approved real estate school or institution shall establish and permanently maintain a record for each student. The record shall include all of the following information:~~

- ~~(a) The student's name and address.~~
- ~~(b) The number of clock hours attended.~~
- ~~(c) The student's grade.~~
- ~~(d) The date of certificate issuance.~~

~~(2) Records shall be available for inspection during normal business hours by an authorized representative of the department, when such inspection does not violate a law.~~

**R 339.22637 Rescinded.**

~~R 339.22637 Certificate of completion; content.~~

~~Rule 637. A real estate school, or institution shall issue a certificate of completion to a student who successfully completes a prelicensure course. The certificate shall include all of the following information:~~

- ~~(a) The date of course completion.~~
- ~~(b) The name of the course attended.—~~
- ~~(c) The name of the school, or institution.~~
- ~~(d) The name of the student.~~
- ~~(e) The number of clock hours completed by the student.~~
- ~~(f) The signature of the course coordinator.~~

**SUBPART 3. CONTINUING EDUCATION COURSES**

**R 339.22651 Criteria for approval of continuing education courses.**

Rule 651. Courses related to the activities of a real estate broker, associate broker, or salesperson that are offered to licensees shall meet all of the following criteria for department approval:

- (a) A clear statement of the rationale, purpose, and goals shall be prepared for each course before beginning instruction.
- (b) ~~Qualified~~ APPROVED instructors shall conduct each course.
- (c) A syllabus shall be submitted to the department, which shall include ALL OF the following as they are pertinent to the activities of licensees generally and, if desired, with additional reference to a specialized area of expertise:
  - (i) Changes in economic conditions.
  - (ii) Changes in laws, court opinions, and rules.
  - (iii) Interpretations relating to and affecting real property. ~~Annually, the board and the department shall provide a list of known changes and interpretations for the purpose of the development of the syllabus.~~
- (d) A course administration description shall be provided, which shall include a system for verifying satisfactory completion of the course by each licensee, for providing to the department a verified list of those licensees awarded credit, and for providing participating licensees with certificates which indicate satisfactory completion of the course and which specify the department's assigned course number.
- (e) The sponsor shall have provided or arranged for appropriate educational facilities, supporting reference materials or a library, and all necessary instructional aids and equipment consistent with the educational content, format, and objectives of each learning experience.
- (F) FOR DISTANCE LEARNING COURSES, THE APPLICATION SHALL ALSO INCLUDE A DETAILED CONTENT OUTLINE, STUDENT HANDOUTS, IN HARD COPY OR ON DISC OR CD-ROM.
- (G) ~~(F)~~ The sponsor shall SUBMIT TO ~~notify~~ the department, ~~at the earliest practical time,~~ of any course changes which affect the accuracy of the application for approval or accompanying documentation, INCLUDING THE DETAILED CONTENT OUTLINE.

**R 339.22654 DISTANCE EDUCATION; CRITERIA FOR APPROVAL.**

R 654. (1) REAL ESTATE EDUCATION COURSES REPRESENTED AS FULFILLING THE REQUIREMENTS OF SECTION 2504 OF THE CODE AND DELIVERED THROUGH DISTANCE LEARNING SHALL BE APPROVED BY THE DEPARTMENT FOR BOTH DELIVERY SYSTEM AND CONTENT BEFORE BEING OFFERED TO THE PUBLIC.

(2) DELIVERY SYSTEMS WHICH HAVE MET THE DISTANCE EDUCATION CRITERIA FOR CURRENT CERTIFICATION BY THE ASSOCIATION OF REAL ESTATE LICENSE LAW OFFICIALS (ARELLO) SHALL BE ACCEPTABLE TO THE DEPARTMENT, AS FOLLOWS:

(A) PROOF OF ARELLO CERTIFICATION, INCLUDING THE SUMMARY SHEET AND CERTIFICATE, SHALL BE PROVIDED WITH THE APPLICATION FOR COURSE APPROVAL.

(B) IF A COMBINATION OF PRIMARY COURSE DEVELOPER OR SECONDARY COURSE PROVIDERS IS INVOLVED, ALL ENTITIES SHALL HAVE ACHIEVED ARELLO CERTIFICATION.

(C) UPON NOTIFICATION FROM ARELLO THAT CERTIFICATION HAS BEEN WITHDRAWN OR NOT RENEWED, THE APPROVED SPONSOR SHALL FORWARD THE NOTIFICATION TO THE DEPARTMENT. APPROVAL TO OFFER DISTANCE LEARNING COURSES SHALL BE SUSPENDED UNTIL ARELLO CERTIFICATION IS REINSTATED OR THE SPONSOR HAS APPLIED FOR AND RECEIVED APPROVAL FROM THE DEPARTMENT ACCORDING TO SUBRULE (3) OF THIS RULE.

(3) DELIVERY SYSTEMS WHICH HAVE NOT BEEN CERTIFIED BY ARELLO SHALL APPLY TO THE DEPARTMENT FOR APPROVAL. THE APPLICATION SHALL INCLUDE DOCUMENTATION FOR ALL OF THE FOLLOWING COMPONENTS BEFORE APPROVAL WILL BE GRANTED BY THE DEPARTMENT:

(A) A DIAGNOSTIC ASSESSMENT COMPONENT THAT PROVIDES ADEQUATE REMEDIATION FOR SPECIFIC DEFICIENCIES IDENTIFIED DURING THE STUDENT'S INVOLVEMENT.

(B) MEASUREMENTS THAT ENSURE THAT EACH COURSE SHALL TEACH TO MASTERY AT REGULAR INTERVALS. TEACHING TO MASTERY MEANS THAT EACH COURSE SHALL, AT A MINIMUM, COMPLY WITH ALL OF THE FOLLOWING PROVISIONS:

(i) DIVIDE THE MATERIAL INTO MAJOR UNITS OF CONTENT.

(ii) DIVIDE EACH OF THE MAJOR UNITS OF CONTENT INTO MODULES OF INSTRUCTION FOR DELIVERY.

(iii) SPECIFY THE LEARNING OBJECTIVES FOR EACH MODULE OF INSTRUCTION.

(C) INCLUDE ASSESSMENT COMPONENTS THAT MEASURE WHETHER THE UNITS HAVE BEEN MASTERED BEFORE CONTINUING TO THE NEXT LEVEL.

(D) INCLUDE A SYSTEM TO MONITOR STUDENT ENROLLMENT, PARTICIPATION, AND COURSE COMPLETION.

(E) INCLUDE A METHOD WHICH WILL VERIFY THAT THE STATED CLASSROOM HOURS ARE CONSISTENT WITH THE ACTUAL HOURS REQUIRED TO COMPLETE THE COURSE. ACTUAL HOURS SHALL BE BASED ON THE MINIMUM NUMBER OF HOURS REQUIRED TO COMPLETE THE COURSE AND SHALL NOT BE BASED ON AVERAGE HOURS FOR COMPLETION. THE DEPARTMENT SHALL DETERMINE FINAL APPROVAL OF CLASSROOM HOURS.

(F) INCLUDE A SYSTEM WHICH REQUIRES STUDENTS TO PROCEED FROM COURSE BEGINNING TO END BY ENSURING THAT THE SEQUENCE OF MODULES CANNOT BE ALTERED.

(G) INCLUDE A METHOD FOR DETERMINING SUCCESSFUL COMPLETION OF THE COURSE. IF AN EXAMINATION IS REQUIRED, STUDENTS SHALL PASS THE EXAMINATION BEFORE BEING PROVIDED A CERTIFICATE OF COMPLETION. THE EXAMINATION SHALL BE A PROCTORED FINAL EXAMINATION ADMINISTERED ON-SITE AT AN APPROVED SPONSOR'S FACILITY. IF AN EXAMINATION IS NOT REQUIRED, THE COURSE SPONSOR SHALL PROVIDE, TO THE STUDENT, A SIGNED CERTIFICATION ATTESTING TO THE IDENTITY OF THE PERSON COMPLETING THE COURSE.

(H) A PERFORMANCE HISTORY OF THE TECHNOLOGY USED IN THE COURSE. THE HISTORY SHALL CONTAIN REFERENCES FROM PERSONS WHO CAN ATTEST TO THE PERFORMANCE OF THE TECHNOLOGY, INCLUDING ANY HARDWARE AND SOFTWARE USED IN THE APPLICABLE COURSE.

(I ) A DESCRIPTION OF THE HARDWARE AND SOFTWARE USED BY THE PROVIDER AND WHICH THE STUDENT NEEDS TO COMPLETE THE COURSE. THE DESCRIPTION SHALL INCLUDE AN ASSESSMENT OF THE AVAILABILITY AND ADEQUACY OF THE EQUIPMENT RELATIVE TO THE INSTRUCTIONAL CLAIMS OF THE COURSE.

(J) A PLAN THAT OUTLINES HOW THE SPONSOR WILL HANDLE TECHNOLOGICAL FAILURES OF EITHER THE SOFTWARE OR HARDWARE.

(K) A PLAN THAT DETAILS THE TECHNICAL SUPPORT PROVIDED BY THE SPONSOR ON AN ONGOING BASIS.



(L) IF A COMBINATION OF PRIMARY COURSE DEVELOPERS OR SECONDARY COURSE PROVIDERS IS INVOLVED, THEN ALL ENTITIES SHALL MEET THE REQUIREMENTS STATED IN THIS RULE.

(4) THE DEPARTMENT SHALL APPROVE COURSE CONTENT TO ENSURE THAT IT MEETS THE REQUIREMENTS OF SECTION 2504 (4) OF THE CODE.

(5) ALL DISTANCE EDUCATION COURSES SHALL BE OFFERED UNDER THE SUPERVISION OF A MICHIGAN-APPROVED INSTRUCTOR WHO SHALL DO BOTH OF THE FOLLOWING::  
BE AVAILABLE TO ANSWER STUDENTS QUESTIONS OR PROVIDE ASSISTANCE AS NECESSARY.

(B) PROVIDE REASONABLE OVERSIGHT OF STUDENT WORK IN ORDER TO ENSURE THAT THE STUDENT WHO COMPLETES THE WORK IS THE STUDENT WHO IS ENROLLED IN THE COURSE.

(6) ALL DISTANCE EDUCATION COURSES SHALL BE SUCCESSFULLY COMPLETED WITHIN 1 YEAR FROM THE DATE OF INITIAL ENROLLMENT.

**R 339.22655 Time periods; course credit.**

Rule 655. To receive approval, a course shall be designed to be taught for not less than 2 ~~clock~~ CLASSROOM hours, not including time spent on breaks, meals, COMPUTER TUTORIALS, or other unrelated activities.

**R 339.22659 Attendance.**

Rule 659. A licensee ~~shall attend a course in its entirety to obtain credit and~~ shall complete a total of 6 ~~clock~~ CLASSROOM hours for each annual renewal period. Credit for completion of a course shall only be granted once in each annual renewal period.

**R 339.22661 Rescinded.**

~~R 339.22661 Student records; content; inspection.~~

~~Rule 661. (1) A real estate school or institution shall establish and permanently maintain a record for each student. The record shall include all of the following information:~~

~~(a) The student's name and address.~~

~~(b) The number of clock hours attended.~~

~~(c) The date of course completion.~~

~~(2) Records shall be available for inspection during normal business hours by an authorized representative of the department, when such inspection does not violate a law.~~

**R 339.22663 Certification of completion of course.**

Rule 663. Licensees and course sponsors shall certify the completion of an approved course in a method ~~or on~~ ~~forms~~ prescribed by the department. Within 15 calendar days ~~after a course is taught~~, course sponsors shall submit THE NAMES OF STUDENTS WHO HAVE SUCCESSFULLY COMPLETED THE COURSE to the department. ~~lists of licensees who have completed the course.~~

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**NOTICE OF PUBLIC HEARING**

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**DEPARTMENT OF CONSUMER & INDUSTRY SERVICES**

**BUREAU OF COMMERCIAL SERVICES**

**REAL ESTATE RULES (ORR #2001-071)**

June 25, 2002  
2501 Woodlake Circle Okemos, Michigan  
Conference Room 1 10:00 a.m.

The Department of Consumer and Industry Services will hold a public hearing on Tuesday June 25, 2002 at the Bureau of Commercial Services, 2501 Woodlake Circle, Okemos, Michigan, in Conference Room 1 at 10:00 a.m. The hearing is being held to receive comments on proposed changes to the Administrative Rules for Real Estate Broker and Salesperson licensees. Comments can also be made in writing at or prior to the hearing via mail, or electronic-mail at the addresses listed in this notice.

Changes to the rules include: clarification of the definition and authority of principal and non-principal associate brokers; requirements for issuance of broker licenses to a business entity; adding partial credit towards pre-licensure broker education for a masters degree in business administration; expansion of methods of delivery of transaction documents to include electronic communications and digital signatures; procedures for acceptance of commissions and other compensation; handling of deposits and earnest monies in the event of disputes; filing requirements for out-of-state land sales; and adoption of approval standards for distance learning sponsors and institutions to offer real estate education courses through distance learning programs.

The rules [Rule Set 2001-071 CI] are published in the *Michigan Register* in the June 15, 2002 Issue, and on the Michigan Government Web site at: <http://www.michigan.gov/orr>. To request print or e-mail copies of the rules, please contact the Department of CIS at the following address:

Department of Consumer & Industry Services  
Nancy Dixon, Bureau of Commercial Services  
P. O. Box 30018  
Lansing MI 48909-7518

Phone: 517/241-9219 FAX: 17/241-7539 e-mail: [ndixon@michigan.gov](mailto:ndixon@michigan.gov)

The hearing will be conducted in compliance with the 1990 Americans with Disabilities Act, in an accessible building with handicap parking available. Anyone needing assistance to take part in the hearing may call 517/241-9219 to make arrangements.

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**ENROLLED SENATE AND HOUSE BILLS  
SIGNED INTO LAW OR VETOED  
(2002 SESSION)**

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*Mich. Const. Art. IV, §33 provides: “Every bill passed by the legislature shall be presented to the governor before it becomes law, and the governor shall have 14 days measured in hours and minutes from the time of presentation in which to consider it. If he approves, he shall within that time sign and file it with the secretary of state and it shall become law . . . If he does not approve, and the legislature has within that time finally adjourned the session at which the bill was passed, it shall not become law. If he disapproves . . . he shall return it within such 14-day period with his objections, to the house in which it originated.”*

*Mich. Const. Art. IV, §27, further provides: “No act shall take effect until the expiration of 90 days from the end of the session at which it was passed, but the legislature may give immediate effect to acts by a two-thirds vote of the members elected to and serving in each house.”*

*MCL 24.208 states in part:*

*“Sec. 8. (1) The office of regulatory reform shall publish the Michigan register at least once each month. The Michigan register shall contain all of the following:*

\* \* \*

*(b) On a cumulative basis, the numbers and subject matter of the enrolled senate and house bills signed into law by the governor during the calendar year and the corresponding public act numbers.*

*(c) On a cumulative basis, the numbers and subject matter of the enrolled senate and house bills vetoed by the governor during the calendar year.”*

**ENROLLED SENATE AND HOUSE BILLS  
SIGNED INTO LAW OR VETOED  
(2002 SESSION)**

Public Act No.	Enrolled House Bill	Enrolled Senate Bill	I.E.* Yes / No	Governor Approved Date	Filed Date	Effective Date	Subject
1		472	Yes	1/21	1/23	01/23/02	<b>STATE;</b> Funds; children's trust fund; revise investment options. ( <b>Sen. S. Johnson</b> )
2	5027		Yes	1/21	1/23	01/23/02	<b>HIGHWAYS;</b> Name; renaming certain portion of M-69; designate as "Oscar G. Johnson Memorial Highway". ( <b>Rep. D. Bovin</b> )
3		430	No	2/6	2/7	**	<b>ENVIRONMENTAL PROTECTION;</b> Other; dark sky preserve; repeal sunset. ( <b>Sen. B. Hammerstrom</b> )
4		471	Yes	2/6	2/7	02/07/02	<b>FINANCIAL INSTITUTIONS;</b> Other; licensing of residential mortgage originator; clarify. ( <b>Sen. B. Leland</b> )
5		615	Yes	2/6	2/7	02/07/02	<b>HIGHWAYS;</b> Name; renaming a certain portion of US-127; establish as the "Gary Priess Memorial Highway." ( <b>Sen. V. Garcia</b> )
6	5436		Yes	2/14	2/14	02/14/02	<b>PROPERTY;</b> Conveyances; transfer of certain state owned properties in Tuscola county and Wayne county; provide for. ( <b>Rep. T. Meyer</b> )
7		682	Yes	2/14	2/14	02/14/02	<b>CHILDREN;</b> Support; citation in divorce law; enact change necessitated by 2001 PA 107. ( <b>Sen. B. Hammerstrom</b> )
8		683	Yes	2/14	2/14	02/14/02	<b>CHILDREN;</b> Support; citation in the family support act; enact changes necessitated by 2001 PA 111. ( <b>Sen. B. Hammerstrom</b> )
9		684	Yes	2/14	2/14	02/14/02	<b>CHILDREN;</b> Support; citation in child custody act; enact change necessitated by 2001 PA 108. ( <b>Sen. B. Hammerstrom</b> )
10		434	Yes	2/14	2/14	02/14/02	<b>CHILDREN;</b> Protection; reporting suspected child abuse or neglect; clarify provisions and add categories of mandated reporters. ( <b>Sen. B. Hammerstrom</b> )

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11	4195		Yes	2/18	2/19	02/19/02	<b>HEALTH FACILITIES;</b> Nursing homes; individual responsible for receiving complaints and conducting complaint investigations; require nursing home to have such individual available 24 hours per day, 7 days per week. <b>(Rep. B. Patterson)</b>
12	4980		Yes	2/18	2/19	02/19/02	<b>HIGHWAYS;</b> Name; renaming certain portion of I-69; designate as "Purple Heart Highway." <b>(Rep. P. DeWeese)</b>
13	5005		Yes	2/18	2/19	2/19/02	<b>TRANSPORTATION;</b> Other; motor fuels quality; revise standards and penalties. <b>(Rep. L. Julian)</b>
14	5009		Yes	2/18	2/19	2/19/02	<b>CHILDREN;</b> Abuse or neglect; failure to report; increase penalties. <b>(Rep. M. Middaugh)</b>
15	4487		Yes	2/21	2/21	2/21/02	<b>COMMERCIAL CODE;</b> Sales; price of goods for which a writing is required for an enforceable contract; increase minimum to \$1,000.00. <b>(Rep. J. Koetje)</b>
16	4009		Yes	2/27	2/28	2/28/02	<b>AGRICULTURE;</b> Other; low-interest loans for certain agricultural disasters; provide for. <b>(Rep. R. Jelinek)</b>
17	4812		Yes	2/28	3/1	3/1/02	<b>LIENS; Generally;</b> ownership and lien rights of dies, molds, and forms ; revise. <b>(Rep. A. Richner)</b>
18	5382		Yes	2/28	3/1	3/1/2002 #	<b>COMMERCIAL CODE;</b> Secured transactions; reference to molder's lien act in secured transactions; amend uniform commercial code to provide. <b>(Rep. M. Mortimer)</b>
19	5023		Yes	3/4	3/4	03/04/02	<b>COUNTIES;</b> Other; recording requirements of register of deeds; revise. <b>(Rep. A. Sanborn)</b>
20	5024		Yes	3/4	3/4	03/04/02	<b>PROPERTY;</b> Land contracts; contracts for sale of land; eliminate witness requirement. <b>(Rep. A. Sanborn)</b>
21	5025		Yes	3/4	3/4	03/04/02	<b>LAND USE;</b> Land division; signatures on proprietor's certificate on the plat; eliminate witness requirement. <b>(Rep. A. Sanborn)</b>

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22	5186		Yes	3/4	3/4	03/04/02	<b>COUNTIES</b> ; Employees and officers; requirement for medical examiner to live in county of appointment; eliminate, and repeal acts and parts of acts. ( <b>Rep. G. Van Woerkom</b> )
23	5022		Yes	3/4	3/4	03/04/02	<b>COUNTIES</b> ; Employees and officers; procedure for recording deeds and mortgages; eliminate witness requirement. ( <b>Rep. A. Sanborn</b> )
24		505	No	3/5	3/6	** #	<b>CRIMINAL PROCEDURE</b> ; Sentencing guidelines; sentencing guideline provisions for possession of firearms on commercial airport property; provide for. ( <b>Sen. P. Hoffman</b> )
25		718	Yes	3/5	3/6	03/06/02	<b>WORKER'S COMPENSATION</b> ; Insurers; certain assessments; revise. ( <b>Sen. B. Bullard Jr.</b> )
26		496	Yes	3/5	3/6	03/06/02	<b>INSURANCE</b> ; Insurers; service of process in certain cases; provide for. ( <b>Sen. B. Bullard Jr.</b> )
27	4028		Yes	3/5	3/6	03/06/02	<b>LOCAL GOVERNMENT</b> ; Other; spot blight designation and acquisition; provide for. ( <b>Rep. A. Richner</b> )
28	5389		Yes	3/7	3/7	04/01/02	<b>CRIMINAL PROCEDURE</b> ; Sentencing guidelines; technical amendments; provide for. ( <b>Rep. W. McConico</b> )
29	5390		Yes	3/7	3/7	04/01/02	<b>CRIMINAL PROCEDURE</b> ; Sentencing guidelines; technical amendments; provide for. ( <b>Rep. W. O'Neil</b> )
30	5391		Yes	3/7	3/7	04/01/02	<b>CRIMINAL PROCEDURE</b> ; Sentencing guidelines; technical amendments; provide for. ( <b>Rep. J. Faunce</b> )
31	5392		Yes	3/7	3/7	04/01/02	<b>CRIMINAL PROCEDURE</b> ; Sentencing guidelines; technical amendments; provide for. ( <b>Rep. L. Julian</b> )

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32		493	Yes	3/7	3/7	03/07/02	<b>INSURANCE</b> ; Other; requirement for commissioner to obtain approval of a circuit court judge before issuing a subpoena in certain cases; eliminate. ( <b>Sen. B. Bullard Jr.</b> )
33	5483		Yes	3/7	3/7	3/7/2002 #	<b>BUSINESSES</b> ; Nonprofit corporations; career development and distance learning; provide for in nonprofit corporation act. ( <b>Rep. J. Gilbert II</b> )
34	5393		Yes	3/7	3/7	***	<b>CRIMINAL PROCEDURE</b> ; Sentencing guidelines; technical amendments; provide for. ( <b>Rep. J. Faunce</b> )
35		541	Yes	3/7	3/7	05/15/02	<b>AERONAUTICS</b> ; Other; general amendments; provide for. ( <b>Sen. W. North</b> )
36	5482		Yes	3/7	3/7	03/07/02	<b>BUSINESSES</b> ; Nonprofit corporations; establishment and operation of registered distance learning corporations; authorize. ( <b>Rep. J. Allen</b> )
37		604	Yes	3/7	3/7	03/07/02	<b>INSURANCE</b> ; Property and casualty; mandatory exams of rating organizations; eliminate. ( <b>Sen. V. Garcia</b> )
38		605	Yes	3/7	3/7	03/07/02	<b>INSURANCE</b> ; No-fault; reference to public service commission certification; revise to the department of transportation. ( <b>Sen. M. Goschka</b> )
39	5139		Yes	3/11	3/12	03/12/02	<b>EDUCATION</b> ; School districts; access to high school campus and certain student directory information for official armed forces recruiting representatives; require. ( <b>Rep. W. Kuipers</b> )
40	4690		Yes	3/11	3/12	03/12/02	<b>STATE</b> ; Interstate compacts and agreements; Michigan participation in the interstate compact for adult offender supervision; establish. ( <b>Rep. C. LaSata</b> )
41	5337		Yes	3/11	3/12	03/12/02	<b>TRANSPORTATION</b> ; Carriers; weight restrictions on certain highways or roads; revise. ( <b>Rep. J. Gilbert II</b> )

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42	4987		Yes	3/12	3/12	03/12/02	<b>OCCUPATIONS;</b> Real estate; procedure for a deposit held by an escrowee; clarify. ( <b>Rep. M. Bishop</b> )
43		180	Yes	3/13	3/14	03/14/02	<b>CRIMES;</b> Prostitution; qualifying underlying offenses to establish second, third, and subsequent offense violations; amend. ( <b>Sen. B. Schuette</b> )
44	4325		Yes	3/13	3/14	6/1/2002 #	<b>CRIMES;</b> Prostitution; criteria for determining prior prostitution offenses; amend to include consideration of local ordinance violations. ( <b>Rep. C. Bisbee</b> )
45	5449		Yes	3/13	3/14	6/1/2002 #	<b>CRIMES;</b> Prostitution; age limit restricting prosecution for certain prostitution violations; revise, and eliminate requirement of knowledge of age of child for certain other sex-related crimes. ( <b>Rep. J. Gilbert II</b> )
46		1029	Yes	3/13	3/14	6/1/2002 #	<b>CRIMES;</b> Prostitution; age limit for charging certain prostitution violations; revise. ( <b>Sen. T. McCotter</b> )
47	5033		Yes	3/13	3/14	6/1/2002 #	<b>CRIMINAL PROCEDURE;</b> Sentencing guidelines; sentencing guidelines for crime of soliciting child to commit an immoral act; enact. ( <b>Rep. M. Kowall</b> )
48		880	Yes	3/14	3/14	11/1/2002 #	<b>PUBLIC UTILITIES;</b> Other; fee structures for use of public rights-of-way; provide for. ( <b>Sen. J. Schwarz</b> )
49		881	Yes	3/14	3/14	03/14/02	<b>COMMUNICATIONS;</b> Telecommunications; Michigan community communications development authority; create. ( <b>Sen. L. Stille</b> )
50		999	Yes	3/14	3/14	3/14/2002 #	<b>PROPERTY TAX;</b> Other; credit for the purchase and installation of certain telecommunications equipment; provide for. ( <b>Sen. V. Garcia</b> )

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51	4672		Yes	3/12	3/15	03/15/02	<b>EDUCATION</b> ; Other; model local policy concerning the administration of medications to students at school; provide for. ( <b>Rep. J. Hansen</b> )
52		796	Yes	3/12	3/15	*** #	<b>NATURAL RESOURCES</b> ; Trust funds; natural resources trust fund; provide for expanded investment authority. ( <b>Sen. G. McManus Jr.</b> )
53		797	Yes	3/12	3/15	*** #	<b>VETERANS</b> ; Trust fund; investment authority; expand. ( <b>Sen. V. Garcia</b> )
54		798	Yes	3/12	3/15	*** #	<b>NATURAL RESOURCES</b> ; Trust funds; state parks endowment fund; provide for expanded investment authority. ( <b>Sen. C. Dingell</b> )
55		799	Yes	3/12	3/15	*** #	<b>NATURAL RESOURCES</b> ; Trust funds; nongame fish and wildlife trust fund; expand investment authority. ( <b>Sen. A. Smith</b> )
56		800	Yes	3/12	3/15	*** #	<b>NATURAL RESOURCES</b> ; Trust funds; game and fish protection trust fund; expand investment authority. ( <b>Sen. L. Bennett</b> )
57		801	Yes	3/12	3/15	*** #	<b>NATURAL RESOURCES</b> ; Trust funds; Michigan civilian conservation corps endowment fund; expand investment authority. ( <b>Sen. D. Koivisto</b> )
58	5404		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. ( <b>Rep. J. Allen</b> )
59	5405		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of school districts to pay for loans from state; modify. ( <b>Rep. M. Bishop</b> )
60	5406		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for emergency loans for school districts; repeal. ( <b>Rep. L. DeVuyst</b> )
61	5407		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. ( <b>Rep. J. Gilbert II</b> )

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62	5408		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. ( <b>Rep. J. Howell</b> )
63	5409		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. ( <b>Rep. J. Koetje</b> )
64	5410		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. ( <b>Rep. M. Middaugh</b> )
65	5414		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. ( <b>Rep. S. Thomas III</b> )
66	5412		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. ( <b>Rep. G. Van Woerkom</b> )
67	5413		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. ( <b>Rep. S. Vear</b> )
68	5416		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. ( <b>Rep. L. Lemmons III</b> )
69	5417		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. ( <b>Rep. A. Lipsey</b> )
70	5418		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. ( <b>Rep. J. Rivet</b> )
71	5419		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the school aid act; modify. ( <b>Rep. M. Waters</b> )
72	5420		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of community colleges; modify. ( <b>Rep. P. Zelenko</b> )
73	5423		Yes	3/14	3/15	03/15/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of community colleges; modify. ( <b>Rep. M. Pumford</b> )

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74		592	Yes	3/14	3/15	03/15/02	<b>INSURANCE;</b> Third party administrators; requirement that third party administrators have administrative service manager; eliminate. ( <b>Sen. B. Bullard Jr.</b> )
75		692	Yes	3/14	3/15	03/15/02	<b>LAND USE;</b> Farmland and open space; agricultural conservation easement or purchase of development rights; provide that entry into automatically terminates development rights agreement without lien and entitles landowner to tax credit and revise circumstances for relinquishment of farmland from development rights agreement. ( <b>Sen. B. Hammerstrom</b> )
76	5119		Yes	3/14	3/15	03/15/02	<b>LIQUOR;</b> Licenses; small distillery license fee; decrease. ( <b>Rep. S. Rocca</b> )
77	5585		Yes	3/21	3/21	03/21/02	<b>CIVIL PROCEDURE;</b> Civil actions; interest on judgment on a written instrument evidencing indebtedness that bears an interest rate; revise to make application of recent change prospective and provide mechanism for fixing rate when instrument bears a variable interest rate. ( <b>Rep. A. Richner</b> )
78	5205		Yes	3/25	3/25	03/25/02	<b>TRANSPORTATION;</b> Carriers; number of axles allowed on certain designated highways; clarify. ( <b>Rep. J. Gilbert II</b> )
79	4859		Yes	3/25	3/25	03/25/02	<b>CORRECTIONS;</b> Employees; record of controlled substance offenses that were subject to dismissal and discharge; allow to be used by department of corrections or law enforcement agencies for specified purposes. ( <b>Rep. L. Julian</b> )
80	5434		No	3/25	3/25	**	<b>TRADE;</b> Other; grain dealers act; provide general amendments. ( <b>Rep. T. Meyer</b> )
81	4860		Yes	3/25	3/25	03/25/02	<b>NATURAL RESOURCES;</b> Hunting; requirement for lottery to issue wild turkey hunting license; eliminate. ( <b>Rep. M. Mortimer</b> )

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82	5026		Yes	3/25	3/26	03/26/02	<b>WEAPONS;</b> Firearms; transportation requirements for certain firearms; clarify. ( <b>Rep. S. Vear</b> )
83		884	Yes	3/25	3/26	03/26/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in vocational education acts; eliminate. ( <b>Sen. T. McCotter</b> )
84		885	Yes	3/25	3/26	03/26/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in social welfare act; eliminate. ( <b>Sen. T. McCotter</b> )
85		886	Yes	3/25	3/26	03/26/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general regarding commitment to certain institutions; eliminate. ( <b>Sen. T. McCotter</b> )
86		888	Yes	3/25	3/26	03/26/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general regarding certain auction duties; eliminate. ( <b>Sen. T. McCotter</b> )
87		890	Yes	3/25	3/26	03/26/02	<b>LEGISLATURE;</b> Auditor general; act regarding Michigan dairymen's association; repeal. ( <b>Sen. T. McCotter</b> )
88		894	Yes	3/25	3/26	03/26/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in the code of criminal procedure; eliminate. ( <b>Sen. T. McCotter</b> )
89		895	Yes	3/25	3/26	03/26/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in the prison code; eliminate. ( <b>Sen. T. McCotter</b> )
90		690	Yes	3/26	3/26	03/26/02	<b>STATE;</b> Authorities; authority to oversee the operation of certain types of airports including Detroit metropolitan Wayne county airport; create. ( <b>Sen. G. Steil</b> )
91	5216		Yes	3/26	3/27	4/9/2002 #	<b>ELECTIONS;</b> Voting equipment; uniform statewide voting system; provide for under certain conditions. ( <b>Rep. B. Patterson</b> )
92	5674		No	3/27	3/27	**	<b>COURTS;</b> Circuit court; certain judicial circuits and judicial districts; reform, and allow the office of district judge and probate judge to be combined in certain counties. ( <b>Rep. K. Bradstreet</b> )

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93	5732		Yes	3/27	3/27	3/27/2002 #	<b>RETIREMENT</b> ; State employees; early retirement for certain state employees; allow under certain circumstances. ( <b>Rep. P. DeWeese</b> )
94	5110		Yes	3/27	3/27	3/27/2002 #	<b>RETIREMENT</b> ; Public school employees; public pension protection and health advance funding; provide for. ( <b>Rep. S. Caul</b> )
95	5112		Yes	3/27	3/27	3/27/2002 #	<b>RETIREMENT</b> ; Judges; public pension protection; provide for. ( <b>Rep. A. Lipsey</b> )
96	5113		Yes	3/27	3/27	3/27/2002 #	<b>RETIREMENT</b> ; State police; public pension protection; provide for. ( <b>Rep. C. Brown</b> )
97	5114		Yes	3/27	3/27	3/27/2002 #	<b>RETIREMENT</b> ; Legislative; public pension protection; provide for. ( <b>Rep. S. Thomas III</b> )
98	5111		Yes	3/27	3/27	3/27/2002 #	<b>RETIREMENT</b> ; Fire and police; public pension protection; provide for. ( <b>Rep. J. Howell</b> )
99	5109		Yes	3/27	3/27	3/27/2002 #	<b>RETIREMENT</b> ; State employees; public pension protection; provide for. ( <b>Rep. J. Voorhees</b> )
100	5108		Yes	3/27	3/27	3/27/2002 #	<b>RETIREMENT</b> ; Generally; public pension protection act; enact. ( <b>Rep. J. Vander Roest</b> )
101	5125		Yes	3/27	3/27	07/01/02	<b>CRIMES</b> ; Larceny; manufacture, distribution, or possession of a theft detection shielding device or of a tool designed to deactivate or remove a theft detection device; prohibit and provide penalties. ( <b>Rep. M. Bishop</b> )
102	5126		Yes	3/27	3/27	7/1/2002 #	<b>CRIMINAL PROCEDURE</b> ; Sentencing guidelines; sentencing guidelines for a theft detection device offense; enact. ( <b>Rep. M. Bishop</b> )
103		887	Yes	3/27	3/27	03/27/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general regarding compensation of injured peace officers; eliminate. ( <b>Sen. T. McCotter</b> )
104		889	Yes	3/27	3/27	03/27/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general regarding protective committees; eliminate. ( <b>Sen. T. McCotter</b> )

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105		892	Yes	3/27	3/27	03/27/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in the insurance code of 1956; eliminate. ( <b>Sen. T. McCotter</b> )
106		896	Yes	3/27	3/27	03/27/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in university funds; eliminate. ( <b>Sen. T. McCotter</b> )
107	5145		Yes	3/27	3/27	03/27/02	<b>NATURAL RESOURCES</b> ; Other; conservation district annual meeting; allow for change of date. ( <b>Rep. D. Mead</b> )
108	4937		Yes	3/27	3/27	03/27/02	<b>NATURAL RESOURCES</b> ; Fishing; minimum age for voluntary all-species fishing license; eliminate. ( <b>Rep. S. Tabor</b> )
109		543	Yes	3/27	3/27	07/01/02	<b>LIENS</b> ; Garage keepers; garage keeper's lien act; clarify certain procedures. ( <b>Sen. L. Bennett</b> )
110		678	Yes	3/27	3/27	03/27/02	<b>USE TAX</b> ; Collections; motor vehicles held for resale; define price tax base. ( <b>Sen. B. Bullard Jr.</b> )
111	5327		Yes	4/1	4/1	04/01/02	<b>EDUCATION</b> ; Curricula; model financial literacy programs; provide for. ( <b>Rep. M. Bishop</b> )
112		730	Yes	3/29	4/1	04/22/02	<b>CRIMINAL PROCEDURE</b> ; Search and seizure; search warrant affidavits; revise procedures. ( <b>Sen. S. Johnson</b> )
113		930	Yes	3/29	4/1	4/22/2002 #	<b>CRIMES</b> ; Other; certain acts relating to terrorism; prohibit and provide penalties. ( <b>Sen. D. DeGrow</b> )
114		936	Yes	3/29	4/1	5/1/2002 #	<b>CRIMINAL PROCEDURE</b> ; Grand jury; certain grand jury information regarding terrorism-related offenses; clarify information sharing procedures. ( <b>Sen. B. Bullard Jr.</b> )
115		939	Yes	3/29	4/1	4/22/2002 #	<b>CRIMES</b> ; Other; crime of obtaining certain diagrams or descriptions of vulnerable targets with the intent to commit a terrorist act; create. ( <b>Sen. J. Schwarz</b> )

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+ - Line item veto

# - Tie bar

Public Act No.	Enrolled House Bill	Enrolled Senate Bill	I.E.* Yes / No	Governor Approved Date	Filed Date	Effective Date	Subject
116		940	Yes	3/29	4/1	4/22/2002 #	<b>CRIMES;</b> Definitions; definition of vulnerable target in explosives chapter of penal code; expand to include stadiums, critical transportation infrastructures, and public services providers. ( <b>Sen. W. North</b> )
117		942	Yes	3/29	4/1	4/22/2002 #	<b>CRIMES;</b> Other; use of the internet or other electronic or telecommunication system or device to disrupt critical infrastructures or governmental operations; provide penalties. ( <b>Sen. B. Hammerstrom</b> )
118		943	Yes	3/29	4/1	05/01/02	<b>TRANSPORTATION;</b> Carriers; penalties for the transportation of hazardous materials without a hazardous materials endorsement; increase. ( <b>Sen. K. Sikkema</b> )
119		948	Yes	3/29	4/1	4/22/2002 #	<b>CRIMINAL PROCEDURE;</b> Statute of limitations; statute of limitations for certain crimes involving terrorism; eliminate. ( <b>Sen. M. Goschka</b> )
120		949	Yes	3/29	4/1	4/22/2002 #	<b>CRIMINAL PROCEDURE;</b> Sentencing; restitution to all governmental entities for terrorist activities; require. ( <b>Sen. L. Bennett</b> )
121		994	Yes	3/29	4/1	04/01/02	<b>MILITARY AFFAIRS;</b> Other; military leaves and reemployment protection for members of the military who have been called to active service; clarify. ( <b>Sen. A. Miller Jr.</b> )
122		995	Yes	3/29	4/1	4/22/2002 #	<b>CRIMINAL PROCEDURE;</b> Sentencing guidelines; certain crimes involving terrorism; include in sentencing guidelines. ( <b>Sen. D. Koivisto</b> )
123		996	Yes	3/29	4/1	4/22/2002 #	<b>CRIMINAL PROCEDURE;</b> Sentencing guidelines; sentencing guidelines for crime of certain threats and false reports relating to terrorism; enact. ( <b>Sen. D. Byrum</b> )
124		997	Yes	3/29	4/1	4/22/2002 #	<b>CRIMES;</b> Other; terrorism; include as predicate offense for racketeering violation. ( <b>Sen. B. Leland</b> )

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125		1005	Yes	3/29	4/1	04/01/02	<b>HEALTH FACILITIES;</b> Hospitals; biohazard detection and handling plan; require each hospital to establish. ( <b>Sen. M. Scott</b> )
126	4037		Yes	3/29	4/1	04/22/02	<b>TRAFFIC CONTROL;</b> Driver license; penalties for an individual who reproduces, alters, counterfeits, forges, or duplicates a license photograph; increase. ( <b>Rep. J. Faunce</b> )
127	5041		Yes	3/29	4/1	4/22/2002 #	<b>TRAFFIC CONTROL;</b> Driver license; sentencing guidelines for crimes relating to forging driver licenses; enact. ( <b>Rep. J. Kooiman</b> )
128	5270		Yes	3/29	4/1	04/22/02	<b>CRIMINAL PROCEDURE;</b> Search and seizure; search warrant affidavits; declare to be nonpublic information. ( <b>Rep. S. Caul</b> )
129	5295		Yes	3/29	4/1	04/22/02	<b>CRIMINAL PROCEDURE;</b> Jurisdiction; jurisdiction for prosecution of criminal offense; clarify. ( <b>Rep. G. DeRossett</b> )
130	5349		Yes	3/29	4/1	05/01/02	<b>CIVIL RIGHTS;</b> Public records; critical infrastructure; exempt from freedom of information act. ( <b>Rep. M. Shulman</b> )
131	5495		Yes	3/29	4/1	4/22/2002 #	<b>CRIMES;</b> Other; certain acts relating to terrorism; prohibit and provide penalties. ( <b>Rep. J. Howell</b> )
132	5496		Yes	3/29	4/1	05/01/02	<b>STATE;</b> Planning; Michigan emergency management act; revise powers and duties. ( <b>Rep. G. Newell</b> )
133	5501		Yes	3/29	4/1	05/01/02	<b>MILITARY AFFAIRS;</b> Other; procedure for granting immunity to certain military personnel ordered to respond to acts or threats of terrorism, procedure for apprehending individuals, access restrictions to real property used for military purposes, and plans for defense of state; authorize and clarify. ( <b>Rep. R. Richardville</b> )

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134	5506		Yes	3/29	4/1	04/22/02	<b>CRIMES</b> ; Other; crime of using, delivering, or possessing an imitation explosive; include possession as violation. <b>(Rep. C. Phillips)</b>
135	5507		Yes	3/29	4/1	04/22/02	<b>CRIMES</b> ; Other; penalties for knowingly placing a harmful substance in food or water supply; increase. <b>(Rep. G. Woronchak)</b>
136	5509		Yes	3/29	4/1	4/22/2002 #	<b>CRIMES</b> ; Money laundering; terrorism; include in definition of “specified criminal offense”. <b>(Rep. N. Quarles)</b>
137		946	Yes	4/1	4/1	4/22/2002 #	<b>CRIMINAL PROCEDURE</b> ; Sentencing guidelines; certain crimes involving terrorism; include in sentencing guidelines. <b>(Sen. W. Van Regenmorter)</b>
138		468	Yes	4/1	4/1	04/01/02	<b>PROPERTY</b> ; Conveyances; certain parcels of state owned property in Genesee, Wayne, and Kalkaska counties; provide for conveyance. <b>(Sen. J. Cherry Jr.)</b>
139		899	Yes	4/1	4/1	04/01/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general for federal roads; eliminate. <b>(Sen. T. McCotter)</b>
140	5511		Yes	4/1	4/1	4/22/2002 #	<b>CRIMES</b> ; Definitions; definition of vulnerable target in explosives chapter of penal code; expand to include certain other structures and facilities. <b>(Rep. L. Toy)</b>
141	5512		Yes	4/1	4/1	4/22/2002 #	<b>CRIMINAL PROCEDURE</b> ; Other; compensation to victims and payment of expenses for government response for terrorism-related offenses; provide for. <b>(Rep. G. Jacobs)</b>
142	5513		Yes	4/1	4/1	05/01/02	<b>CRIMINAL PROCEDURE</b> ; Forfeiture; seizure and forfeiture of property used in connection with a terrorism-related offense; provide for. <b>(Rep. C. LaSata)</b>

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143	5520		Yes	4/1	4/1	4/22/2002 #	<b>CRIMINAL PROCEDURE;</b> Sentencing guidelines; certain crimes involving terrorism; include in sentencing guidelines. <b>(Rep. D. Bovin)</b>
144		1105	Yes	4/1	4/1	4/1/2002 +	<b>APPROPRIATIONS;</b> Higher education; higher education; provide for fiscal year 2002-2003. <b>(Sen. J. Schwarz)</b>
145		902	Yes	4/1	4/2	04/02/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in hospitals and sanatoria; eliminate. <b>(Sen. T. McCotter)</b>
146	5400		Yes	4/1	4/2	04/02/02	<b>INSURANCE;</b> Life; ability to provide excess loss insurance; provide for. <b>(Rep. L. Julian)</b>
147	5328		Yes	4/1	4/2	04/02/02	<b>PROPERTY;</b> Land contracts; definition of “real estate mortgage”; clarify. <b>(Rep. M. Bishop)</b>
148	5118		Yes	Unsigned	4/5	04/05/02	<b>NATURAL RESOURCES;</b> Gas and oil; slant drilling beneath Great Lakes; prohibit except for existing leases. <b>(Rep. S. Shackleton)</b>
149	5021		Yes	4/8	4/8	07/01/02	<b>TRAFFIC CONTROL;</b> Speed restrictions; penalties for violation of speed limit in construction zone; increase number of points added to driving record. <b>(Rep. J. Allen)</b>
150		811	Yes	4/8	4/8	04/08/02	<b>TRANSPORTATION;</b> Other; use of rights-of-way, structures, welcome centers, and rest stops for commercial intelligent transportation system applications; allow. <b>(Sen. B. Bullard Jr.)</b>
151		812	Yes	4/8	4/8	04/08/02	<b>TRANSPORTATION;</b> Other; use of rights-of-way, structures, welcome centers, and rest stops for commercial intelligent transportation system applications; allow. <b>(Sen. B. Bullard Jr.)</b>
152	5422		Yes	4/8	4/8	04/08/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of community colleges; modify. <b>(Rep. T. Meyer)</b>

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Public Act No.	Enrolled House Bill	Enrolled Senate Bill	I.E.* Yes / No	Governor Approved Date	Filed Date	Effective Date	Subject
153		897	Yes	4/8	4/8	04/08/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general regarding veterans' trust funds; eliminate. ( <b>Sen. T. McCotter</b> )
154		898	Yes	4/8	4/8	04/08/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in state board of equalization; eliminate. ( <b>Sen. T. McCotter</b> )
155		900	Yes	4/8	4/8	04/08/02	<b>AGRICULTURE</b> ; Other; act to reimburse for pest eradication; repeal. ( <b>Sen. T. McCotter</b> )
156		901	Yes	4/8	4/8	04/08/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general for agricultural college lands; eliminate. ( <b>Sen. T. McCotter</b> )
157		385	Yes	4/8	4/8	01/01/03	<b>EDUCATION</b> ; Board members; requirements for nomination as a candidate for office of school board; revise. ( <b>Sen. K. Sikkema</b> )
158		386	Yes	4/8	4/8	01/01/03	<b>ELECTIONS</b> ; Candidates; requirements for nomination as a candidate for county commissioner; revise. ( <b>Sen. T. McCotter</b> )
159		387	Yes	4/8	4/8	01/01/03	<b>LIBRARIES</b> ; District; requirements for nomination as a candidate for district library board; revise. ( <b>Sen. B. Hammerstrom</b> )
160		388	Yes	4/8	4/8	01/01/03	<b>LIBRARIES</b> ; Other; requirements for nomination as a candidate for office of library board; revise. ( <b>Sen. B. Hammerstrom</b> )
161		1100	Yes	4/8	4/8	04/08/02	<b>APPROPRIATIONS</b> ; Community colleges; community and junior colleges; provide for fiscal year 2002-2003. ( <b>Sen. H. Gast</b> )
162		397	Yes	4/8	4/8	04/08/02	<b>STATE</b> ; Symbol; mastodon; establish as state fossil. ( <b>Sen. T. McCotter</b> )
163	5335		Yes	4/9	4/9	04/09/02	<b>ELECTIONS</b> ; Ballots; provisions regulating names and designations on ballots; revise and clarify. ( <b>Rep. A. Richner</b> )
164		346	Yes	4/10	4/11	04/11/02	<b>TORTS</b> ; Liability; definition of wrongful or negligent act against a pregnant individual; expand to include the death of the embryo or fetus. ( <b>Sen. W. Van Regenmorter</b> )

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165		971	Yes	4/10	4/11	04/11/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the property tax act; modify. ( <b>Sen. S. Johnson</b> )
166		973	Yes	4/10	4/11	04/11/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the property tax act; modify. ( <b>Sen. D. Byrum</b> )
167		903	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general regarding certain universities; eliminate. ( <b>Sen. T. McCotter</b> )
168		904	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to duties of the auditor general for certain forest roads; eliminate. ( <b>Sen. T. McCotter</b> )
169		905	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to duties of the auditor general regarding certain education funds; eliminate. ( <b>Sen. T. McCotter</b> )
170		906	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to duties of the auditor general in Michigan agricultural college act; eliminate. ( <b>Sen. T. McCotter</b> )
171		907	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to duties of the auditor general in sanatoriums act; eliminate. ( <b>Sen. T. McCotter</b> )
172		908	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to duties of the auditor general in military bonus bonds act; eliminate. ( <b>Sen. T. McCotter</b> )
173		909	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to duties of the auditor general in veterans' military pay act; eliminate. ( <b>Sen. T. McCotter</b> )
174		910	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to duties of the auditor general in Korean veterans' pay act; eliminate. ( <b>Sen. T. McCotter</b> )

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175		911	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE;</b> Auditor general; reference to duties of the auditor general in insect and pests act; eliminate. <b>(Sen. T. McCotter)</b>
176		912	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE;</b> Auditor general; reference to duties of the auditor general regarding bonds for certain state officers; eliminate. <b>(Sen. T. McCotter)</b>
177		913	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE;</b> Auditor general; reference to duties of the auditor general in certain state lands; eliminate. <b>(Sen. T. McCotter)</b>
178		915	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE;</b> Auditor general; reference to duties of the auditor general regarding certain school taxes; eliminate. <b>(Sen. T. McCotter)</b>
179		916	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE;</b> Auditor general; reference to duties of the auditor general regarding certain state land; eliminate. <b>(Sen. T. McCotter)</b>
180		918	Yes	4/23	4/23	04/23/02	<b>LEGISLATURE;</b> Auditor general; reference to duties of the auditor general for certain tax payments; eliminate. <b>(Sen. T. McCotter)</b>
181	5415		Yes	4/23	4/23	04/23/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of the revised school code; modify. <b>(Rep. C. Kolb)</b>
182	5421		Yes	4/23	4/23	04/23/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of community colleges; modify. <b>(Rep. W. Kuipers)</b>
183	5516		Yes	4/23	4/24	05/01/02	<b>FINANCIAL INSTITUTIONS;</b> Banks; financial institution to seize funds of terrorist organizations; require. <b>(Rep. D. Sheltrown)</b>
184	5517		Yes	4/23	4/24	5/1/02	<b>FINANCIAL INSTITUTIONS;</b> Credit unions; financial institution to seize funds of terrorist organizations; require. <b>(Rep. M. Waters)</b>
185	5518		Yes	4/23	4/24	5/1/02	<b>FINANCIAL INSTITUTIONS;</b> Savings and loan associations; financial institution to seize funds of terrorist organizations; require. <b>(Rep. W. McConico)</b>

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186		829	Yes	4/23	4/24	4/24/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority relating to the management of state funds; modify. ( <b>Sen. V. Garcia</b> )
187		830	Yes	4/23	4/24	4/24/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of the executive organization act of 1965; repeal. ( <b>Sen. B. Leland</b> )
188		831	Yes	4/23	4/24	4/24/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of the department of management and budget; modify. ( <b>Sen. V. Garcia</b> )
189		832	Yes	4/23	4/24	4/24/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for city exhibition areas; modify. ( <b>Sen. A. Smith</b> )
190		835	Yes	4/23	4/24	04/24/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of tax increment finance authorities; modify. ( <b>Sen. V. Garcia</b> )
191		1107	Yes	4/25	4/26	04/26/02	<b>APPROPRIATIONS;</b> School aid; school aid; adjust for fiscal year 2001-2002 and provide for fiscal year 2002-2003. ( <b>Sen. L. Stille</b> )
192	5763		Yes	4/26	4/26	04/26/02	<b>EMPLOYMENT SECURITY;</b> Benefits; unemployment benefits; increase, revise calculation and payment, and include Indian tribes. ( <b>Rep. R. Richardville</b> )
193		966	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for municipal borrowing; modify. ( <b>Sen. G. Peters</b> )
194		967	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for borrowing for road purposes; modify. ( <b>Sen. V. Garcia</b> )
195		968	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for bonds or notes for capital improvements; modify. ( <b>Sen. R. Emerson</b> )
196		969	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of an employee-owned corporation revolving loan fund; repeal. ( <b>Sen. D. Byrum</b> )
197		970	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of the property tax act; modify. ( <b>Sen. B. Bullard Jr.</b> )

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198		972	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the property tax act; modify. ( <b>Sen. S. Johnson</b> )
199		974	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of county improvement act; modify. ( <b>Sen. K. DeBeaussaert</b> )
200		975	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of county and regional parks; modify. ( <b>Sen. A. Sanborn</b> )
201		976	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of home rule cities; modify. ( <b>Sen. S. Johnson</b> )
202		978	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of blighted area rehabilitation; modify. ( <b>Sen. B. Leland</b> )
203		979	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of county zoning act; modify. ( <b>Sen. T. McCotter</b> )
204		980	Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of township zoning act; modify. ( <b>Sen. T. McCotter</b> )
205	5182		Yes	4/26	4/29	04/29/02	<b>OCCUPATIONS</b> ; Electricians; installation, maintenance, or servicing of certain lawn irrigation equipment and landscape lighting; exempt from license requirements. ( <b>Rep. W. Kuipers</b> )
206	5576		Yes	4/26	4/29	05/01/02	<b>CRIMINAL PROCEDURE</b> ; Sentencing guidelines; technical amendments; provide for. ( <b>Rep. J. Faunce</b> )
207	5480		Yes	4/26	4/29	04/29/02	<b>FOOD</b> ; Other; protection of halal food; provide penalties for consumer fraud. ( <b>Rep. G. Woronchak</b> )
208	5525		Yes	4/26	4/29	04/29/02	<b>AGRICULTURE</b> ; Weights and measures; voluntary registration of certain persons; provide for and update standards. ( <b>Rep. G. Van Woerkom</b> )
209	5136		Yes	4/26	4/29	04/29/02	<b>AGRICULTURE</b> ; Plants; destruction of certain crops grown for certain purposes; provide civil damages. ( <b>Rep. T. Meyer</b> )

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210		1032	Yes	4/26	4/29	04/29/02	<b>CRIMES</b> ; Other; provision relating to taunting of an individual as having been a convict or an inmate in a correctional facility or jail; repeal. ( <b>Sen. T. McCotter</b> )
211		1027	Yes	4/26	4/29	04/29/02	<b>ADVERTISING</b> ; Other; provision relating to sale and distribution of publications reporting certain criminal activity; repeal. ( <b>Sen. T. McCotter</b> )
212	5102		Yes	4/26	4/29	04/29/02	<b>CORRECTIONS</b> ; Other; short title for department of corrections act; provide for. ( <b>Rep. J. Faunce</b> )
213	5623		Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. S. Tabor</b> )
214	5625		Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. G. DeRossett</b> )
215	5626		Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. S. Ehardt</b> )
216	5627		Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. D. Mead</b> )
217	5628		Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. S. Hummel</b> )
218	5629		Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. M. Murphy</b> )
219	5630		Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. W. McConico</b> )

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Public Act No.	Enrolled House Bill	Enrolled Senate Bill	I.E.* Yes / No	Governor Approved Date	Filed Date	Effective Date	Subject
220	5631		Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. M. Waters</b> )
221	5632		Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. D. Hale</b> )
222	5633		Yes	4/26	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. S. Pestka</b> )
223		842	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; Michigan tax lien sale and collateralized securities act; repeal. ( <b>Sen. B. Hammerstrom</b> )
224		843	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority under the revised judiciary act; modify. ( <b>Sen. W. Van Regenmorter</b> )
225		844	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of federal facility development act, the federal data facility act, and corresponding income tax credit; repeal. ( <b>Sen. J. Schwarz</b> )
226		845	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of townships; modify. ( <b>Sen. W. Van Regenmorter</b> )
227		847	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for township water supply and sewage disposal services and facilities; modify. ( <b>Sen. B. Bullard Jr.</b> )
228		849	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for township parks and places of recreation; modify. ( <b>Sen. B. Bullard Jr.</b> )
229		850	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for public improvements; modify. ( <b>Sen. S. Johnson</b> )

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Public Act No.	Enrolled House Bill	Enrolled Senate Bill	I.E.* Yes / No	Governor Approved Date	Filed Date	Effective Date	Subject
230		851	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of charter townships; modify. ( <b>Sen. T. McCotter</b> )
231		855	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of fourth class cities; modify. ( <b>Sen. W. North</b> )
232		857	Yes	27-Apr	29-Apr	4/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of a community swimming pool authority; modify. ( <b>Sen. W. Van Regenmorter</b> )
233		858	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of recreational authorities; modify. ( <b>Sen. S. Johnson</b> )
234		860	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of downtown development authorities; modify. ( <b>Sen. B. Bullard Jr.</b> )
235		861	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority under local development financing act; modify. ( <b>Sen. D. Shugars</b> )
236		862	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority under resort district rehabilitation act; modify. ( <b>Sen. B. Hammerstrom</b> )
237		864	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for state convention facility development; modify. ( <b>Sen. M. Scott</b> )
238		865	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of county departments of solid waste management; modify. ( <b>Sen. G. Peters</b> )
239		866	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for garbage disposal plants; modify. ( <b>Sen. J. Young Jr.</b> )

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240		867	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for city and village garbage disposal; modify. ( <b>Sen. J. Young Jr.</b> )
241		868	Yes	4/27	4/29	04/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of municipal sewage and water supply systems; modify. ( <b>Sen. K. DeBeaussaert</b> )
242		869	Yes	4/27	4/29	4/29/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority under land reclamation and improvement authority act; modify. ( <b>Sen. M. Dunaskiss</b> )
243		1166	Yes	4/30	4/30	4/30/02	<b>PROPERTY TAX;</b> State education tax; summer levy; require. ( <b>Sen. H. Gast</b> )
244		1165	Yes	4/30	4/30	4/30/02	<b>PROPERTY TAX;</b> Millage; 1-time collection of a summer tax levy; provide for and amend title. ( <b>Sen. J. Schwarz</b> )
245	5298		Yes	4/30	4/30	5/1/02	<b>CRIMINAL PROCEDURE;</b> Mental capacity; "guilty but mentally ill" provisions; revise to conform with insanity statute. ( <b>Rep. J. Koetje</b> )
246	5411		Yes	4/30	4/30	5/1/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of the revised school code; modify. ( <b>Rep. M. Mortimer</b> )
247		1007	Yes	4/30	4/30	5/1/02	<b>FINANCIAL INSTITUTIONS;</b> Savings banks; financial institution to seize funds of terrorist organizations and report to attorney general; require. ( <b>Sen. G. Peters</b> )
248	5624		Yes	4/30	4/30	04/30/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. L. Julian</b> )
249	5634		Yes	4/30	4/30	04/30/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. I. Clark</b> )
250		839	Yes	5/1	5/1	05/01/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of uniform budgeting and accounting act; modify. ( <b>Sen. H. Gast</b> )

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251		882	Yes	5/1	5/1	05/01/02	<b>INSURANCE;</b> No-fault; automobile insurance placement facility to provide for premium surcharges for various infractions; allow. ( <b>Sen. A. Sanborn</b> )
252		1026	Yes	5/1	5/1	05/01/02	<b>TRANSPORTATION;</b> Carriers; requirement for vehicles transporting gasoline, benzine, or naphtha to be painted red; eliminate. ( <b>Sen. T. McCotter</b> )
253		1057	Yes	5/1	5/1	05/01/02	<b>HIGHWAYS;</b> Construction and repair; widening and altering of state trunk line highways with approval of state administrative board; repeal certain section. ( <b>Sen. T. McCotter</b> )
254	5472		Yes	5/1	5/1	05/01/02	<b>ECONOMIC DEVELOPMENT;</b> Brownfield redevelopment authority; specific taxes; include neighborhood enterprise zone act. ( <b>Rep. J. Allen</b> )
255	4507		Yes	5/1	5/1	05/01/02	<b>SALES TAX;</b> Exemptions; exemption from paying sales tax on certain items; clarify procedure. ( <b>Rep. L. DeVuyst</b> )
256		837	Yes	5/1	5/1	05/01/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of local governmental units to accept financial transaction device payments; modify. ( <b>Sen. R. Emerson</b> )
257		838	Yes	5/1	5/1	05/01/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of local units authorizing and regulating credit card transactions; modify. ( <b>Sen. V. Garcia</b> )
258		1006	Yes	5/1	5/1	*** #	<b>AERONAUTICS;</b> Other; criminal background checks on applicants for flight schools; require and provide for refusal to enroll under certain circumstances. ( <b>Sen. G. Hart</b> )

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259	5504		Yes	5/1	5/1	05/01/02	<b>TRAFFIC CONTROL;</b> Driver license; criminal background checks on applicants for commercial driver license; require. <b>(Rep. R. Brown)</b>
260		1034	Yes	5/1	5/1	05/01/02	<b>CRIMES;</b> Other; criminal provision relating to inciting an individual to violate a peace treaty with an Indian native or tribe; repeal. <b>(Sen. T. McCotter)</b>
261		1035	Yes	5/1	5/1	5/1/2002 #	<b>CRIMINAL PROCEDURE;</b> Sentencing guidelines; sentencing guidelines for crime of inciting an individual to violate a peace treaty with an Indian native or tribe; eliminate. <b>(Sen. T. McCotter)</b>
262		1037	Yes	5/1	5/1	05/01/02	<b>CRIMES;</b> Other; criminal provision relating to the use of bells on cutters and sleighs; repeal. <b>(Sen. D. Koivisto)</b>
263	5152		Yes	5/1	5/1	05/01/02	<b>FINANCIAL INSTITUTIONS;</b> Savings banks; conversion of a chartered savings bank to a mutual holding company; provide for. <b>(Rep. A. Sanborn)</b>
264	4848		Yes	5/8	5/9	05/09/02	<b>LAW ENFORCEMENT;</b> Other; provision regarding the appointment of unqualified undersheriff or deputy sheriff; repeal. <b>(Rep. T. Stamas)</b>
265	5151		Yes	5/8	5/9	01/01/03	<b>CIVIL PROCEDURE;</b> Civil actions; limitation on appeal bond; establish. <b>(Rep. A. Richner)</b>
266	5440		Yes	5/8	5/9	7/15/2002 #	<b>CRIMES;</b> Assaultive; assaulting, resisting, or obstructing an officer causing bodily injury, serious impairment of a body function, or death; prohibit and establish penalties. <b>(Rep. J. Faunce)</b>
267	5211		Yes	5/8	5/9	05/09/02	<b>PROPERTY TAX;</b> Personal property; electronic filing of personal property statement; allow. <b>(Rep. S. Vear)</b>

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268		982	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of community swimming pool authority; modify. <b>(Sen. B. Leland)</b>
269	5441		Yes	5/8	5/9	7/15/2002 #	<b>CRIMINAL PROCEDURE;</b> Sentencing guidelines; sentencing guidelines for crimes of assaulting, resisting, or obstructing an officer seriously injuring or causing injury, serious impairment, or death; provide for. <b>(Rep. L. Julian)</b>
270	5442		Yes	5/8	5/9	5/9/2002 #	<b>CRIMES;</b> Assaultive; penalties for assaulting, beating, wounding, obstructing, or endangering an officer other than a peace officer; establish. <b>(Rep. J. Kooiman)</b>
271	5443		Yes	5/8	5/9	5/9/2002 #	<b>CRIMINAL PROCEDURE;</b> Sentencing guidelines; sentencing guidelines for crime of assaulting, beating, wounding, obstructing, or endangering officers other than peace officers; provide for. <b>(Rep. R. Basham)</b>
272	5601		Yes	5/8	5/9	7/15/2002 #	<b>CRIMINAL PROCEDURE;</b> Sentencing guidelines; sentencing guidelines for crime of obstructing firefighter; eliminate. <b>(Rep. M. Kowall)</b>
273		846	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of pavements, sidewalks, and elevated structures; modify. <b>(Sen. J. Young Jr.)</b>
274		848	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of township and village public improvements and public services; modify. <b>(Sen. K. DeBeaussaert)</b>
275		852	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of county boards of commissioners; modify. <b>(Sen. A. Smith)</b>

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276		853	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of general law village act; modify. ( <b>Sen. W. North</b> )
277		854	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of home rule village act; modify. ( <b>Sen. K. DeBeaussaert</b> )
278		1045	Yes	5/8	5/9	5/9/2002 #	<b>CRIMINAL PROCEDURE;</b> Sentencing guidelines; sentencing guidelines for crime of embezzlement of railroad passenger tickets; eliminate. ( <b>Sen. C. Dingell</b> )
279		1047	Yes	5/8	5/9	5/9/2002 #	<b>CRIMINAL PROCEDURE;</b> Sentencing guidelines; sentencing guidelines for crime of larceny of railroad tickets; eliminate. ( <b>Sen. C. Dingell</b> )
280	5568		Yes	5/8	5/9	05/09/02	<b>ECONOMIC DEVELOPMENT;</b> Plant rehabilitation; provision to include electric generating plants; extend sunset. ( <b>Rep. N. Cassis</b> )
281	5755		Yes	5/8	5/9	05/09/02	<b>HIGHWAYS;</b> Bridges; provision relating to construction of interstate bridge between Michigan and Wisconsin; repeal. ( <b>Rep. B. Patterson</b> )
282	5752		Yes	5/8	5/9	05/09/02	<b>VEHICLES;</b> Equipment; provisions relating to requirement for certain equipment for certain vehicles weighing in excess of 10,000 pounds; repeal. ( <b>Rep. B. Patterson</b> )
283	5486		Yes	5/8	5/9	05/09/02	<b>HOUSING;</b> Condominium; multiple amendments of the condominium act; provide for. ( <b>Rep. M. Bishop</b> )
284		981	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of city and village zoning act; modify. ( <b>Sen. T. McCotter</b> )
285		983	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for neighborhood area improvements; modify. ( <b>Sen. A. Smith</b> )

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286		984	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for permanent improvements by counties; modify. (Sen. W. North)
287		985	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of local improvement revolving fund; modify. (Sen. A. Smith)
288		986	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for purchase of fire fighting equipment; modify. (Sen. A. Miller Jr.)
289		988	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of safe drinking water financial assistance act; modify. (Sen. A. Sanborn)
290		1038	Yes	5/8	5/9	05/09/02	<b>CRIMES</b> ; Robbery; statute relating to entering a train for robbery by means of intimidation; repeal. (Sen. C. Dingell)
291		1039	Yes	5/8	5/9	5/902	<b>CRIMES</b> ; Other; statute relating to forcible detention of a railroad train; repeal. (Sen. C. Dingell)
292		1040	Yes	5/8	5/9	05/09/02	<b>CRIMES</b> ; Robbery; statute relating to seizing a locomotive with mail or express car attached; repeal. (Sen. C. Dingell)
293		1042	Yes	5/8	5/9	05/09/02	<b>CRIMES</b> ; Fraud; criminal provision relating to the issuance of stocks, bonds, or corporate obligations in railroad companies; repeal. (Sen. C. Dingell)
294		1044	Yes	5/8	5/9	05/09/02	<b>CRIMES</b> ; Embezzlement; criminal provision relating to embezzlement of railroad passenger tickets; repeal. (Sen. C. Dingell)
295		1046	Yes	5/8	5/9	05/09/02	<b>CRIMES</b> ; Larceny; statute prohibiting larceny of railroad passenger ticket; repeal. (Sen. C. Dingell)
296		1048	Yes	5/8	5/9	05/09/02	<b>CRIMES</b> ; Counterfeiting; statute prohibiting forgery of railroad tickets; repeal. (Sen. C. Dingell)

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297		1059	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of industrial development revenue bond act of 1963; modify. ( <b>Sen. J. Emmons</b> )
298		1060	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of city and village water supply; repeal. ( <b>Sen. B. Bullard Jr.</b> )
299		1061	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for public markets; repeal. ( <b>Sen. B. Leland</b> )
300		1063	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of the Michigan municipal distributable aid bond act; modify. ( <b>Sen. J. Emmons</b> )
301		1065	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority for community airports; modify. ( <b>Sen. B. Leland</b> )
302		1066	Yes	5/8	5/9	05/09/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of Michigan export development act; modify. ( <b>Sen. B. Leland</b> )
303	4057		Yes	5/10	5/10	05/10/02	<b>HEALTH FACILITIES;</b> Nursing homes; quality assurance assessment fee, prohibiting employment by certain health facilities of individuals with certain criminal history, and reporting of certain employer disciplinary action; provide for in certain cases. ( <b>Rep. P. Birkholz</b> )
304		748	Yes	5/10	5/10	05/10/02	<b>INSURANCE;</b> Health; health maintenance organization deductibles, quality assurance assessment fee, and medicare supplement policy changes; provide for. ( <b>Sen. B. Hammerstrom</b> )
305		685	Yes	5/11	5/13	05/13/02	<b>HIGHWAYS;</b> Name; portion of I-94 in Battle Creek; designate as the “94th Combat Infantry Division Memorial Highway.” ( <b>Sen. T. McCotter</b> )
306		856	Yes	5/11	5/13	05/13/02	<b>LOCAL GOVERNMENT;</b> Bonds; bonding authority of building authorities; modify. ( <b>Sen. J. Young Jr.</b> )

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307		1068	Yes	5/11	5/13	05/13/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of veterans' memorials on city lands; repeal. (Sen. J. Schwarz)
308		1069	Yes	5/11	5/13	05/13/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for police and fire protection; modify. (Sen. W. Van Regenmorter)
309		1070	Yes	5/11	5/13	05/13/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for county fairs and exhibitions; repeal. (Sen. J. Emmons)
310		1071	Yes	5/11	5/13	05/13/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for water supply and municipal lighting; repeal. (Sen. B. Bullard Jr.)
311		1072	Yes	5/11	5/13	05/13/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for village courthouse or jail; repeal. (Sen. A. Sanborn)
312		1075	Yes	5/11	5/13	05/13/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for joint public buildings; modify. (Sen. D. Shugars)
313		1081	Yes	5/11	5/13	05/13/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for sewerage disposal plants; repeal. (Sen. K. Sikkema)
314		1083	Yes	5/11	5/13	05/13/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for waterfront improvements; repeal. (Sen. B. Bullard Jr.)
315	4799		Yes	5/14	5/14	05/14/02	<b>CITIES</b> ; Home rule; funding for separation of storm water drainage and sanitary sewers on private property; provide for. (Rep. T. Stamas)
316		451	Yes	5/17	5/17	10/01/02	<b>INSURANCE</b> ; Health; timely payment of health care benefits; provide for and establish penalties for noncompliance. (Sen. B. Schuette)
317		452	Yes	5/17	5/17	10/1/2002 #	<b>INSURANCE</b> ; Health care corporations; timely payment of health care benefits; provide for and establish penalties for noncompliance. (Sen. B. Schuette)

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318		934	Yes	5/22	5/22	5/22/2002 #	<b>AERONAUTICS</b> ; Other; criminal background checks on applicants for flight schools ; require. ( <b>Sen. J. Gougeon</b> )
319	5138		Yes	5/23	5/23	05/23/02	<b>STATE</b> ; Symbol; historical society; designate as the official historical society of Michigan. ( <b>Rep. T. George</b> )
320		1043	Yes	5/23	5/23	7/15/2002 #	<b>CRIMINAL PROCEDURE</b> ; Sentencing guidelines; sentencing guidelines for crime of issuing stocks, bonds, or corporate obligations in railroad companies; eliminate. ( <b>Sen. C. Dingell</b> )
321		1049	Yes	5/23	5/23	7/15/2002 #	<b>CRIMINAL PROCEDURE</b> ; Sentencing guidelines; sentencing guidelines for crimes of obstructing a firefighter and forging railroad tickets; eliminate. ( <b>Sen. C. Dingell</b> )
322		1019	Yes	5/23	5/23	05/23/02	<b>AGRICULTURE</b> ; Other; rule-making authority regarding started pullets; repeal. ( <b>Sen. T. McCotter</b> )
323		1025	Yes	5/23	5/23	05/23/02	<b>FINANCIAL INSTITUTIONS</b> ; Banks; provisions relating to the marking of ÓfakeÓ bank bills; repeal. ( <b>Sen. T. McCotter</b> )
324	5547		Yes	5/23	5/23	05/23/02	<b>LAW ENFORCEMENT</b> ; State police; provision prohibiting employees of the Michigan state police from participating in political campaigns; repeal. ( <b>Rep. S. Hummel</b> )
325	4603		Yes	5/23	5/23	05/23/02	<b>CEMETERIES AND FUNERALS</b> ; Burial; prepaid funeral contracts; increase cap. ( <b>Rep. S. Ehardt</b> )
326	5822		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of base conversion authority act; modify. ( <b>Rep. B. Palmer</b> )
327	5823		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of natural resources and environmental protection act; modify. ( <b>Rep. C. Bisbee</b> )

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\*\* - Act takes effect on the 91<sup>st</sup> day after *sine die* adjournment of the Legislature.

\*\*\* - See Act for applicable effective date.

+ - Line item veto

# - Tie bar

Public Act No.	Enrolled House Bill	Enrolled Senate Bill	I.E.* Yes / No	Governor Approved Date	Filed Date	Effective Date	Subject
328	5836		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of metropolitan transportation authorities act of 1967; modify. <b>(Rep. J. Scranton)</b>
329	5839		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the state trunk line highway system; modify. <b>(Rep. G. Newell)</b>
330	5840		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority to borrow from the motor vehicle highway fund; modify. <b>(Rep. M. Shulman)</b>
331	5844		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for limited access highways; modify. <b>(Rep. R. Jamnick)</b>
332	5855		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for township and village libraries; modify. <b>(Rep. B. Vander Veen)</b>
333	5845		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for grade separation bonds; modify. <b>(Rep. K. Stallworth)</b>
334	5821		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the revised school code; modify. <b>(Rep. R. Jelinek)</b>
335	5837		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of public transportation authority; modify. <b>(Rep. L. Julian)</b>
336	5838		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for highways within townships; modify. <b>(Rep. D. Hart)</b>
337	5841		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for mass transportation system authorities; modify. <b>(Rep. J. Hansen)</b>
338	5842		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for public buildings and bridges; modify. <b>(Rep. J. Pappageorge)</b>
339	5843		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Financing; certain references to the municipal finance act; revise. <b>(Rep. A. Richner)</b>

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Public Act No.	Enrolled House Bill	Enrolled Senate Bill	I.E.* Yes / No	Governor Approved Date	Filed Date	Effective Date	Subject
340	5846		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for bridge construction and maintenance; repeal. <b>(Rep. K. Daniels)</b>
341	5847		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for interstate bridge near navigable stream; repeal. <b>(Rep. D. Sheltrown)</b>
342	5848		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of aeronautics code; modify. <b>(Rep. D. Bovin)</b>
343	5849		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of the community mental health authority; modify. <b>(Rep. S. Caul)</b>
344	5851		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for public library bonds; repeal. <b>(Rep. P. Birkholz)</b>
345	5852		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of district library financing act; modify. <b>(Rep. L. Hager)</b>
346	5854		Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority for libraries under boards of education; modify. <b>(Rep. J. Stewart)</b>
347	5707		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in Michigan estate tax act; eliminate. <b>(Rep. B. Patterson)</b>
348	5708		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in collection of specific taxes; eliminate. <b>(Rep. B. Patterson)</b>
349	5709		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in certain drain taxes or highway assessments; eliminate. <b>(Rep. B. Patterson)</b>
350	5710		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in certain bonds and obligations; eliminate. <b>(Rep. B. Patterson)</b>

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\*\*\* - See Act for applicable effective date.

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Public Act No.	Enrolled House Bill	Enrolled Senate Bill	I.E.* Yes / No	Governor Approved Date	Filed Date	Effective Date	Subject
351	5711		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in highway statute; eliminate. ( <b>Rep. B. Patterson</b> )
352	5712		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in aeronautics statute; eliminate. ( <b>Rep. B. Patterson</b> )
353	5713		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in drain code; eliminate. ( <b>Rep. L. Julian</b> )
354	5714		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; agricultural fair commission act; repeal. ( <b>Rep. L. Julian</b> )
355	5717		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in railroad land statute; eliminate. ( <b>Rep. A. Lipsey</b> )
356	5718		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in natural resources and environmental protection act; eliminate. ( <b>Rep. A. Lipsey</b> )
357		1077	Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of economic development corporation act; modify. ( <b>Sen. D. Shugars</b> )
358		1084	Yes	5/23	5/23	05/23/02	<b>LOCAL GOVERNMENT</b> ; Bonds; bonding authority of Michigan energy employment act of 1976; modify. ( <b>Sen. K. Sikkema</b> )
359		639	Yes	5/23	5/23	05/23/02	<b>INSURANCE</b> ; Insurers; priority of claims distribution; modify. ( <b>Sen. B. Bullard Jr.</b> )
360	4655		No	5/23	5/23	**	<b>HEALTH</b> ; Funding; priority of funding for family planning programs and services; revise procedure used by department of community health. ( <b>Rep. M. Jansen</b> )
361	5220		Yes	5/23	5/23	05/23/02	<b>HIGHWAYS</b> ; Name; renaming a certain portion of business route 196; designate as "Cesar E. Chavez Way." ( <b>Rep. J. Voorhees</b> )

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Public Act No.	Enrolled House Bill	Enrolled Senate Bill	I.E.* Yes / No	Governor Approved Date	Filed Date	Effective Date	Subject
362	5611		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to duties of the auditor general regarding certain state officers; eliminate. <b>(Rep. B. Patterson)</b>
363	5612		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in compensation of constitutional convention delegates; eliminate. <b>(Rep. B. Patterson)</b>
364	5613		Yes	5/23	5/23	05/23/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general regarding impeachments; eliminate. <b>(Rep. B. Patterson)</b>
365	5615		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in a statute regarding deposit of bonds for certain state officers; eliminate. <b>(Rep. B. Patterson)</b>
366	5398		Yes	5/24	5/24	09/01/02	<b>CRIMINAL PROCEDURE</b> ; Defenses; defense of the voluntary consumption or ingestion of alcohol or controlled substance in all criminal cases; bar. <b>(Rep. R. Johnson)</b>
367	5662		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in act regarding department of treasury collections; eliminate. <b>(Rep. B. Patterson)</b>
368	5663		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general; eliminate. <b>(Rep. B. Patterson)</b>
369	5664		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general on state administrative board; eliminate. <b>(Rep. W. Kuipers)</b>
370	5665		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE</b> ; Auditor general; reference to auditor general in uniform system of accounting; eliminate. <b>(Rep. W. Kuipers)</b>

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Public Act No.	Enrolled House Bill	Enrolled Senate Bill	I.E.* Yes / No	Governor Approved Date	Filed Date	Effective Date	Subject
371	5666		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in claims to the state police; eliminate. <b>(Rep. L. Julian)</b>
372	5667		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in state employees' retirement act; eliminate. <b>(Rep. L. Julian)</b>
373	5668		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in assessment on certain improvements; eliminate. <b>(Rep. B. Patterson)</b>
374	5669		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in audit of county sheriffs; eliminate. <b>(Rep. B. Patterson)</b>
375	5670		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in home rule village act; eliminate. <b>(Rep. G. Jacobs)</b>
376	5671		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in fourth class city act; eliminate. <b>(Rep. G. Jacobs)</b>
377	5672		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in disconnection of land from cities or villages; eliminate. <b>(Rep. A. Lipsey)</b>
378	5673		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general receiving notice of vacancy in public offices; eliminate. <b>(Rep. A. Lipsey)</b>
379	5614		Yes	5/24	5/24	05/24/02	<b>LEGISLATURE;</b> Auditor general; reference to auditor general in act regarding employment of clerks and assistants to the governor; eliminate. <b>(Rep. B. Patterson)</b>
Veto	4022					03/15/02	<b>TRAFFIC CONTROL;</b> Speed restrictions; speed limits; allow input by townships in setting certain speed limits. <b>(Rep. R. Jamnick)</b>

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**MICHIGAN ADMINISTRATIVE CODE TABLE**  
**(2002 SESSION)**

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*MCL 24.208 states in part:*

*“Sec. 8. (1) The office of regulatory reform shall publish the Michigan register at least once each month. The Michigan register shall contain all of the following:*

\* \* \*

*(i) Other official information considered necessary or appropriate by the office of regulatory reform.”*

*The following table cites administrative rules promulgated during the year 2000, and indicates the effect of these rules on the Michigan Administrative Code (1979 ed.).*

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**MICHIGAN ADMINISTRATIVE CODE TABLE**  
**(2002 RULE FILINGS)**

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R Number	Action	2002 MR Issue	R Number	Action	2002 MR Issue	R Number	Action	2002 MR Issue
281.1224	*	3	285.1317	*	6	285.1516	R	6
285.351	N	4	285.1318	*	6	285.1517	*	6
285.352	N	4	285.1319	*	6	285.1601	R	6
285.353	N	4	285.1320	*	6	285.1602	*	6
285.354	N	4	285.1321	*	6	285.1603	*	6
285.355	N	4	285.1322	*	6	285.1604	*	6
285.356	N	4	285.1323	*	6	285.1605	*	6
285.808.1	*	8	285.1324	*	6	285.1606	*	6
285.808.2	*	8	285.1325	*	6	285.1607	*	6
285.814.1	*	8	285.1326	*	6	285.1608	R	6
285.814.2	*	8	285.1327	*	6	285.1609	R	6
285.814.3	*	8	285.1328	*	6	285.1701	*	6
285.814.4	*	8	285.1329	*	6	285.1702	*	6
285.814.5	*	8	285.1330	*	6	285.1703	*	6
285.814.7	*	8	285.1331	*	6	285.1704	*	6
285.820.1	*	8	285.1332	*	6	285.1705	*	6
285.820.5	*	8	285.1401	*	6	285.1801	*	6
285.820.6	*	8	285.1402	R	6	285.1901	*	6
285.1101	*	6	285.1403	*	6	285.1902	*	6
285.1102	*	6	285.1404	R	6	285.1903	*	6
285.1103	*	6	285.1405	*	6	285.1904	*	6
285.1104	*	6	285.1406	*	6	285.1905	*	6
285.1201	*	6	285.1407	R	6	285.1906	*	6
285.1202	*	6	285.1408	*	6	285.1907	*	6
285.1203	*	6	285.1501	*	6	291.301	*	8
285.1301	*	6	285.1510a	A	6	291.303	*	8
285.1302	*	6	285.1502	*	6	291.304	*	8
285.1303	*	6	285.1503	*	6	291.311	*	8
285.1304	*	6	285.1504	*	6	291.312	*	8
285.1306	*	6	285.1505	*	6	291.313	*	8
285.1307	*	6	285.1506	*	6	291.314	*	8
285.1308	*	6	285.1507	*	6	291.315	*	8
285.1309	*	6	285.1508	*	6	291.316	*	8
285.1310	*	6	285.1509	*	6	291.317	*	8
285.1311	*	6	285.1510	*	6	291.318	*	8
285.1312	*	6	285.1511	*	6	291.319	*	8
285.1313	*	6	285.1512	*	6	291.321	*	8
285.1314	*	6	285.1513	*	6	291.322	*	8
285.1315	*	6	285.1514	*	6	291.331	*	8
285.1316	*	6	285.1515	*	6	291.332	*	8

(\* Amendment to Rule, **A** Added Rule, **N** New Rule, **R** Rescinded Rule)

R Number	Action	2002 MR Issue	R Number	Action	2002 MR Issue	R Number	Action	2002 MR Issue
291.333	*	8	291.401	*	8	325.10116	A	10
291.334	*	8	291.402	*	8	325.10410	*	10
291.335	*	8	291.403	*	8	325.10604c	*	10
291.336	*	8	291.404	*	8	325.10604f	*	10
291.337	*	8	291.405	*	8	325.10705	*	10
291.338	*	8	291.407	A	8	325.10710	*	10
291.339	*	8	291.413	*	8	325.10710a	*	10
291.341	*	8	291.422	*	8	325.10710b	*	10
291.342	*	8	291.423	*	8	325.10710c	*	10
291.343	*	8	291.424	A	8	325.10710d	*	10
291.344	*	8	291.425	*	8	325.10716	*	10
291.345	*	8	291.426	*	8	325.10717b	*	10
291.346	*	8	291.427	*	8	325.10734	*	10
291.347	*	8	291.441	*	8	325.10736	R	10
291.351	*	8	291.442	*	8	325.10738	R	10
291.352	*	8	291.443	*	8	325.11506	*	10
291.353	*	8	291.449	*	8	325.60151	*	1
291.354	*	8	291.450	*	8	325.66201	A	4
291.355	*	8	291.471	*	8	325.77101	*	1
291.356	*	8	291.472	R	8	336.1102	*	10
291.357	*	8	291.473	R	8	336.1104	*	10
291.358	*	8	291.475	R	8	336.1105	*	10
291.359	*	8	291.476	R	8	336.1107	*	10
291.360	*	8	291.478	R	8	336.1108	*	10
291.363	*	8	291.479	R	8	336.1113	*	10
291.365	*	8	291.480	R	8	336.1118	*	10
291.375	*	8	291.491	*	8	336.1120	*	10
291.377	*	8	291.492	*	8	336.1301	*	5
291.378	*	8	291.493	*	8	336.1303	*	5
291.379	*	8	291.494	*	8	336.1330	*	5
291.381	*	8	291.495	R	8	336.1331	*	5
291.391	*	8	291.496	*	8	336.1371	*	5
291.392	*	8	291.497	*	8	336.1372	*	5
291.393	*	8	325.10103	*	10	336.1374	*	5
291.394	*	8	325.10105	*	10	336.1401	*	5
291.395	*	8	325.10106	*	10	336.1403	*	5
291.397	*	8	325.10107	*	10	336.1601	*	5
291.398	*	8	325.10108	*	10	336.1602	*	5
291.399	*	8	325.10109	*	10	336.1604	*	5
291.400a	A	8	325.10112	*	10	336.1605	*	5

(\* Amendment to Rule, **A** Added Rule, **N** New Rule, **R** Rescinded Rule)

R Number	Action	2002 MR Issue	R Number	Action	2002 MR Issue	R Number	Action	2002 MR Issue
336.1606	*	5	336.2021	*	5	338.3161	*	7
336.1607	*	5	336.2040	*	5	338.3162	*	7
336.1608	*	5	336.2041	*	5	338.3162a	*	7
336.1610	*	5	336.2060	*	5	338.3163	*	7
336.1615	*	5	336.2101	*	5	338.3167	*	7
336.1616	*	5	336.2150	*	5	338.3168	*	7
336.1617	*	5	336.2155	*	5	338.3169	*	7
336.1618	*	5	336.2159	*	5	338.3170	*	7
336.1619	*	5	336.2170	*	5	339.23101	*	9
336.1622	*	5	336.2175	*	5	339.23103	*	9
336.1623	*	5	336.2189	*	5	339.23201	*	9
336.1627	*	5	336.2190	*	5	339.23203	*	9
336.1628	*	5	338.1555	A	1	339.23207	*	9
336.1629	*	5	338.3101	*	7	339.23301	*	9
336.1630	*	5	338.3102	*	7	339.23303	*	9
336.1631	*	5	338.3113	*	7	339.23307	*	9
336.1651	*	5	338.3113a	*	7	339.23309	*	9
336.1701	*	5	338.3114a	*	7	339.23311	*	9
336.1702	*	5	338.3117	*	7	339.23317	*	9
336.1703	*	5	338.3119a	*	7	339.23319	*	9
336.1704	*	5	338.3120	*	7	339.23321	*	9
336.1705	*	5	338.3121a	A	7	339.23323	*	9
336.1901	*	5	338.3123	*	7	339.23326	A	9
336.1906	*	5	338.3125	*	7	339.23401	*	9
336.1911	*	5	338.3126	A	7	339.23403	*	9
336.1915	A	10	338.3127	*	7	339.23405	*	9
336.1916	A	10	338.3132	*	7	408.11801	*	7
336.1930	*	5	338.3133	R	7	408.11803	*	7
336.1931	*	5	338.3134	R	7	408.11804	*	7
336.1932	*	5	338.3136	*	7	408.11805	*	7
336.2001	*	5	338.3138	*	7	408.11806	*	7
336.2002	*	5	338.3139	*	7	408.11807	A	7
336.2003	*	5	338.3141	*	7	408.11808	A	7
336.2004	*	5	338.3143	*	7	408.11821	*	7
336.2005	*	5	338.3145	*	7	408.11822	*	7
336.2007	*	5	338.3151	*	7	408.11824	*	7
336.2011	*	5	338.3152	*	7	408.11825	*	7
336.2012	*	5	338.3153	*	7	408.11826	R	7
336.2013	*	5	338.3153a	*	7	408.11827	A	7
336.2014	*	5	338.3154	*	7	408.11833	A	7

(\* Amendment to Rule, **A** Added Rule, **N** New Rule, **R** Rescinded Rule)

R Number	Action	2002 MR Issue Number	R Number	Action	2002 MR Issue Number	R Number	Action	2002 MR Issue Number
408.11835	*	7	418.10916	*	1	423.151	A	1
408.11837	R	7	418.10918	R	1	423.152	A	1
408.11841	*	7	418.10923	*	1	423.153	A	1
408.11843	*	7	418 101005	A	1	423.154	A	1
408.11844	A	7	421.121	*	7	423.155	A	1
408.11845	*	7	421.122	*	7	423.156	A	1
408.11847	*	7	421.150	*	7	423.157	A	1
408.11851	*	7	421.190	*	7	423.158	A	1
408.11852	*	7	421.201	*	7	423.161	A	1
408.11853	*	7	421.204	*	7	423.162	A	1
408.11854	A	7	421.216	*	7	423.163	A	1
408.11855	*	7	421. 210	*	7	423.164	A	1
408.11857	*	7	423.101	A	1	423.165	A	1
408.11859	*	7	423.102	A	1	423.166	A	1
408.11861	*	7	423.103	A	1	423.167	A	1
408.11865	*	7	423.104	A	1	423.171	A	1
408.11871	*	7	423.105	A	1	423.172	A	1
408.11872	*	7	423.121	A	1	423.173	A	1
408.11873	A	7	423.122	A	1	423.174	A	1
408.11874	A	7	423.123	A	1	423.175	A	1
408.11875	*	7	423.124	A	1	423.176	A	1
418.101002	*	1	423.131	A	1	423.177	A	1
418.10107	*	1	423.132	A	1	423.178	A	1
418.10115	*	1	423.133	A	1	423.179	A	1
418.10116	*	1	423.134	A	1	423.181	A	1
418.10117	*	1	423.135	A	1	423.182	A	1
418.10202	*	1	423.136	A	1	423.183	A	1
418.10205	*	1	423.137	A	1	423.184	A	1
418.10405	R	1	423.138	A	1	423.191	A	1
418.10406	R	1	423.141	A	1	423.192	A	1
418.10407	R	1	423.142	A	1	423.193	A	1
418.10411	R	1	423.143	A	1	423.194	A	1
418.10415	R	1	423.144	A	1	423.401	R	1
418.10501	R	1	423.145	A	1	423.403	R	1
418.10502	R	1	423.146	A	1	423.405	R	1
418.10503	R	1	423.147	A	1	423.407	R	1
418.10901	*	1	423.148	A	1	423.411	R	1
418.10904	*	1	423.149	A	1	423.421	R	1
418.10909	A	1	423.149a	A	1	423.422	R	1
418.10912	*	1	423.149b	A	1	423.423	R	1

(\* Amendment to Rule, **A** Added Rule, **N** New Rule, **R** Rescinded Rule)

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423.435	R	1
423.441	R	1
423.442	R	1
423.443	R	1
423.444	R	1
423.445	R	1
423.446	R	1
423.447	R	1
423.448	R	1
423.449	R	1
423.450	R	1
423.451	R	1
423.452	R	1
423.453	R	1
423.454	R	1
423.455	R	1
423.456	R	1
423.461	R	1
423.462	R	1
423.463	R	1
423.464	R	1
423.465	R	1
423.466	R	1
423.467	R	1
423.468	R	1
423.469	R	1
423.470	R	1
423.471	R	1
423.472	R	1
423.481	R	1
423.482	R	1
423.483	R	1
423.484	R	1

(\* Amendment to Rule, **A** Added Rule, **N** New Rule, **R** Rescinded Rule)



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